



REPORT

ON THE

STATE OF PUBLIC HEALTH IN BURMA

DURING 1938

VOLUME I (REPORT)



RANGOON

SUPDT., GOVT. PRINTING AND STATIONERY, BURMA

1939

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RESOLUTION

ON THE

Report on the State of Public Health in Burma

For the year 1938.

Extract from the Proceedings of the Government of Burma, Education Department,
Public Health Branch,—No. 255SJ39, dated the 16th September 1939.

READ—

The Report on the State of Public Health in Burma for the year 1938.

RESOLVED THAT—

The Report be published.

By order,

KYAW DIN,
*Secretary to the Government of Burma,
Education Department.*

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REPORT

ON THE

State of Public Health in Burma

During 1938.

CHAPTER I.

Introduction.

Rainfall.—In Burma, where the agriculturists have to be dependent mainly upon the monsoon for a good harvest, the rainfall has a direct bearing on the prosperity and health of the people. The Director, Burma Meteorological Department, has furnished the following short account of the rainfall during the wet period May to October 1938 :—

“ The total rainfall during the month of May was in large excess in Arakan, Dry Zone and the Shan Plateau, in moderate excess in the Delta and the Northern districts and normal in Tenasserim. In June it was normal in the Northern districts and the Shan Plateau, in slight defect in Tenasserim and the Delta and in moderate defect in Arakan and the Dry Zone. In July it was normal in the Delta and the Northern districts and in slight defect elsewhere in the country. In August it was normal in the country except in Arakan where it was in slight defect. In September the rainfall was in moderate excess in the Dry Zone, in moderate defect in the Northern districts, in large defect in the Shan Plateau and normal elsewhere in the country. In October the rainfall was in large excess in the country except in the Dry Zone where it was in slight excess. On the whole the rainfall over the country during the monsoon period, May to October, 1938, was 15 per cent above normal.”

Economic Conditions.—The Commissioner of Settlements and Land Records, Burma, in reviewing the condition of the agricultural population in the year ending the 30th June 1938 remarks :—“ Prices of agricultural produce were generally lower than last year in all districts. The value of the land still remains low and in certain districts a further fall was reported though in most of the districts the value remained steady. Alienation to non-agriculturists is decreasing. The class which desires to use land as an investment has not yet adjusted its ideas to the prospect of a lower yield and land therefore, and perhaps fortunately, fails to attract as an investment. There has been no substantial change in the relations between landlords and tenants.

Agricultural indebtedness shows no sign of decreasing nor is any substantial decrease likely until alternative sources of capital for agricultural purposes are provided and rents fall. The establishment of

debt conciliation boards in two districts is an attempt to improve the position. Complaints are made in some quarters of unsympathetic treatment by landlords who demanded full rents in spite of diminished outturns even though the landlords obtained remission of land revenue. Several districts however report that the landlords accepted less rent owing to the poor season. Landlords advanced but little money to their tenants. The wages of agricultural labourers were generally low owing to the fall in prices. Hanthawaddy, however, reports that in the flooded area reapers were paid 50 per cent more than in the previous year. Henzada reports that there are indications of increased prosperity among the cultivators, as evidenced by the large number of *pwes*, and the building of *kyaungs* and pagodas. The temporary reductions in land revenue granted by Government to compensate for the lowness of the prevailing prices of agricultural produce exceeded 27 lakhs of rupees. In addition to this reduction, large sums were remitted by district officers on account of damage to crops. The amount remitted in this way was 33 lakhs of rupees. The total amount of reductions and remissions therefore exceeded 60 lakhs of rupees."

Cost of Rice.—Rice is the principal article of diet in Burma. The average cost of a basket of 9 gallons weighing 75 lbs. was Rs. 2-10-0, which is annas two less than the average price prevailing in 1937. In January, the average price stood at Rs. 2-11-0; thereafter it began to decline and reached Rs. 2-8-0 in April. In May there was a rise in price to Rs. 2-10-0 and in June to Rs. 2-11-0, at which level it remained till October. The average price then declined to Rs. 2-10-0 in November and Rs. 2-8-0 in December. The highest annual average price, *viz.*, Rs. 3-9-0 obtained in Prome district and the lowest *viz.*, Rs. 2-0-0 in Meiktila district.

CHAPTER II.

Commentary on Vital Statistics.

Area and Population.—The total area of Burma as recently calculated is 261,747 square miles and the population of this country according to the 1931 census is 14,657,006. But the returns of only 31 districts comprising an area of 117,402 square miles and a population of 12,102,290 are included in the main statements published in Volume II of this report. Of this population 10,689,689 are in the rural and 1,412,601 in the urban areas.

The births and deaths in the backward parts of Burma covering an area of 144,345 square miles with a population of 2,554,716 are shown separately in Statement II (a). These include Bhamo, Myitkyina and Katha districts, where, though full registration is in force, the returns

are not considered to be sufficiently accurate to be included in the main statements. Again the returns from the Shan States, the Salween district and from the Pyinwa circle in Akyab district, where a lesser standard of registration is in force, as well as the returns from the Kachin Hill Tracts and the Arakan Hill Tracts, where registration by tallies or notched bamboo splits is in force, are included in the same statement.

Procedure for Registration and Transmission.—In the rural areas the reporting of births and deaths is made compulsory by rules framed under the Burma Village Act. These rules require that every birth and death occurring in a village-tract shall be reported to the headman within seven days of its occurrence, the report to be made by the owner of the house or if he is absent by the eldest adult male in the house or failing him by the eldest adult female. The headmen register the events in counterfoil books and permanent registers and send one counterfoil to the township office, sometimes through the police station, once a month, once a quarter or once in half-year according to the distance of their village-tracts from the nearest police station. From the foils the township offices prepare vital statistics returns arranged according to months and send them along with the foils to the District Health Officer four times a year. The District Health Officer prepares a consolidated return for the whole district and sends it to the office of the Director of Public Health.

In the urban areas the Burma Municipal Act compels Municipalities to frame byelaws to regulate the registration of birth and deaths. The Public Health Department has drawn up a set of byelaws for the guidance of Municipal and Town Committees in framing their own. Under the model byelaws a birth must be reported to the registrar within a week and an ordinary death within 24 hours. In towns the wardheadmen, and in a few cases, vaccinators and public health inspectors register births and deaths and send the foils to the Health Officer, who submits his weekly and monthly vital statistics returns straight to the Director of Public Health's office, where final consolidation takes place.

Verification of Vital Statistics.—Officers of the Public Health and Administrative Departments have been enjoined to see how far the procedure for reporting, registering and transmitting information regarding births and deaths described above is being followed by all concerned. In the Public Health Department, District Health Officers, Assistant District Health Officers, sub-assistant surgeons, public health inspectors and inspectors of vaccination have to examine the headmen's registers in the village tracts which they visit and test the accuracy of the records by local enquiry. As the village headmen are under the administrative control of the Subdivisional and Township

Officers, these have also been made responsible for supervising their work. During the year the public health and vaccination staff inspected 13,097 out of 32,298 registration stations in the country and verified 634,097 birth and death entries. District officers visited 4,666 villages and verified 97,158 entries. A very large number of verifications have been made by the public health staff in Pakôkku, Henzada, Magwe and Tharrawaddy districts. In the course of their verification of the entries in the vital statistics registers, the public health staff detected 4,806 omissions of births and 421 of deaths and these constitute 1·24 per cent and 0·17 per cent respectively of entries verified. As a result of all inspections 4,383 prosecutions were made of parents and guardians for neglect to report births and deaths within the prescribed time and fines ranging from annas four to rupees ten were imposed in 3,371 cases. Warnings were issued in 772 instances, sentences of imprisonment were passed on two cases and the rest were disposed of otherwise. Action was also taken against 175 headmen for either not registering births and deaths or for not transmitting the foils in time. Fines ranging from annas four to rupees fifteen were imposed in 84 cases, 89 were warned, one reprimanded and one was forced to resign. On the other hand, reports of rewards having been made to village headmen for taking interest in public health work including registration of vital statistics have been received from Myaungmya, Bassein and Pyapôn districts.

Immigration and Emigration.—Monthly statistics of persons who come into or depart from Burma through sea-ports are collected by this Department from the Port Health Officers concerned and sent to the Financial Commissioner, for publication in the Burma Trade Journal. The Port Health Officer, Rangoon, includes in his return, the number of passengers who land at or proceed from Rangoon by the air lines, as well, excluding of course through passengers. While it is admitted that these figures are not complete in that they do not include people who come into or proceed outside the country by the land routes, yet they are useful in indicating the trend of migration in Burma. During the year 213,178 persons landed in Akyab, Kyaukpyu, Bassein, Rangoon, Moulmein, Tavoy and Mergui ports. This figure indicates that there has been a further decline in the volume of immigration in Burma. Departures through these ports totalled 253,431. The excess of the outgoing over the incoming people amounting to 40,253, has to a great extent, to be attributed to the communal disturbances in the country during the year. The vast majority of the traffic occurred through Rangoon, where 188,703 persons landed in and 220,276 persons departed during 1938. The bulk of the passenger traffic was to Indian ports. The port next in importance to Rangoon is Akyab, which recorded 23,642 immigrants and 31,863 emigrants. The excess of the

outgoing over the incoming people at this port is an annual feature and does not indicate truly the move of the population in this district. What happens is that many of the labourers who come from Chittagong into Akyab district during the harvest season by the land routes, return to their native country by sea at the end of the season.

Mid-year Population.—The estimated mid-year population was 13,165,819. This has been arrived at by adding the excess of births over deaths from July 1937 to June 1938 and the balance between immigrants and emigrants by sea (excluding the Arakan figures, which, as has been already stated, show a false balance) in the same period to the population which was similarly estimated to exist in the mid-year 1937. The current year's birth rate will, if calculated on the estimated population, be 31·79 and the death rate 23·65. Seven years have now passed since the last census and the divergence in the birth rates calculated on the census population and on the estimated mid-year population is 2·80 and the divergence in the death rates is 2·08. How far our estimated population is near the truth only the next census can reveal.

General Birth, Death and Infant Mortality Rates.—It will be interesting to see how the birth, death and infant mortality rates of Burma compare with those of some of the western countries which have made great progress in all spheres of public health activities and also with those of our neighbouring countries such as the provinces in India, the Federated Malay States and the Straits Settlements. In 1936 England and Wales have recorded a birth rate of 14·8, a death rate of 12·1, and an infant mortality rate of 59, the corresponding figures for Germany being 19·0, 11·8 and 66, and for France 15·0, 15·3 and 67 respectively. New Zealand which furnishes the best vital statistics figures has in the same year recorded a birth rate of 16·6, a death rate of 8·7 and an infant mortality rate of 31. The birth rate of Burma is more than double of the above countries as also its death rate. Its infant mortality rate is above three times that of England. The significance of the figures lies in the fact that the very large number of births in this country is counterbalanced by sickness and disease among babies, many of whom do not survive their first year of life. Even among those who survive, the morbidity is great, and this results in the eventual lowering of the longevity of the life of the people. The truth of this statement can be exemplified by the fact that the average expectation of life at birth for males in England and Wales according to the 1921 census was 55·62, while in Burma, according to the 1931 census, it was only 30·61.

In the following table a comparison is made of the birth, death and infant mortality rates prevalent in Burma during 1938, with those

the Indian Provinces in the same year and those of the Federated Malay States and Straits Settlements during 1936 :—

Countries.	Birth rate.	Death rate.	Infant mortality rate.
Indian Provinces—			
Madras 1938	38·87	23·46	166·04
Punjab 1938	49·50	26·44	166·84
Assam 1938	29·92	22·42	164·67
Bengal 1938	30·43	26·36	184·66
United Provinces 1938	36·79	25·82	184·61
North West Frontier Province 1938 ..	30·51	22·89	154·08
Central Provinces 1938	43·19	41·07	238·20
Bombay 1938	42·22	30·47	174·16
Sind 1938	19·93	12·40	121·33
Bihar 1938	34·48	23·59	119·86
Orissa 1938	33·76	29·49	221·90
Federated Malay States 1936	38·7	19·2	142
Straits Settlements 1936	44·3	24·9	171
Burma 1938	34·59	25·73	222·57

Birth Rate.—During the year the birth rate, 34·59, remained on the same level as in 1937, being only 0·04 in excess of that year. Compared with the five-year mean the rate, however, shows a rise of 2·21. Male births exceeded female births in all the districts except Pyapôn, Thayetmyo and Myingyan and the number of males born to every 100 females was 104. This proportion of male to female births has remained steady since 1932. An excess of births over deaths was recorded in all the districts except Rangoon. By classes the birth rate among the Burmese or Buddhists was 35·75, while those among the Mohammedans and Christians were 31·58 and 28·29 respectively. The birth rate among the Hindus was only 18·31 and this low rate has to be ascribed to the very high preponderance of males in this class, many of whom leave their families in India during their sojourn in this country. According to the 1931 census there were 388,134 male to 128,261 female Hindus in this country.

Death Rate.—The rate this year is 25·73. It shows an increase of 0·97 compared with the previous year and is in excess of the five-year mean by 4·46. The largest increase in mortality occurred under “all other causes.” It is surmised that an excess of 8,281 deaths of infants under one year recorded during the year was principally returned under this head. There was a welcome diminution in the number of deaths due to cholera and smallpox but this has been counterbalanced by increased mortality under plague and fevers. As in previous years, the lowest death rate was recorded in the month of May and the highest

in December. The highest death rate 26·39 occurred among the Buddhist community which constitutes 10·5 out of 12 millions population for which figures are recorded. The lowest death rate was among the Christians who numbered only 0·28 of a million. Judging the death rates among these communities by sexes it is seen that there is an excess of female over male death rate among the Hindus and Mohammedans. This phenomenon may in part be due to the more indoor life led by the womenfolk of these two communities.

Infant Mortality Rate.—The rate for the year is 222·57. Compared with the previous year it shows a rise of 19·53 and compared with the five-year mean an excess of 23·56. Infant deaths constituted 29·92 per cent of the total mortality. Of the infant deaths 11·69 per cent occurred within one week of birth, 9·88 per cent over one week and not exceeding one month, 62·19 per cent over one month and not exceeding six months and 16·24 per cent over six months and not exceeding one year. Further remarks on the subject are made in the chapter on “Maternity and Child Welfare.” that follows.

Birth Rate (Rural).—There has been a marked improvement in the birth rate recorded in rural areas since 1936 and the current year's rate 34·64 indicates a rise of 0·03 over the previous year and 2·38 over the five-year mean. Rates higher than the provincial rural mean have been recorded in 13 out of 30 districts whose figures are included in the main statements, while 14 districts showed improvement over their last year's figures. The highest rates have been recorded in Yamèthin, Shwebo, Sagaing and Lower Chindwin districts. In Yamèthin district there has been a progressive rise in the birth rate from 30·38 in 1933 to 46·77 this year. This has to be attributed mainly to more efficient check on registration exercised by inspecting officers. Birth and death registers were also maintained by a few *ywagatungs* who were far away from the headmen's villages. In Tavoy there was again extraordinary variation in the birth rate recorded. It increased from 33·80 in 1936 to 46·51 in 1937 but again came down to 30·81 this year. The causes for this fluctuation need looking into. The districts recording the lowest rates are Myingyan, Mandalay, Toungoo, Pegu and Thatôn. In Myingyan district registration of vital statistics seems to have been badly neglected. Nyaung-U township returns a rate of only 10·2 and Kyaukpadaung 18·2. It will first of all be necessary to find out if the fault lies with the villagers in not reporting the events or with the village headmen either in not registering the births or in not transmitting the foils after registration. Omissions to report or register births could only be detected by house to house inspection and local enquiry in the villages. Neglect on the part of the headmen to transmit the foils could be detected in township offices, if only a register showing the

numbers of foils received from each village-tract is maintained in each township office. Unless energetic measures are taken it is not possible to expect any improvement in the low birth rates recorded in the district. The above remarks will also hold good in respect of Mandalay district. The birth rates in Pegu and Toungoo districts are low but there has been some improvement in recent years.

Birth Rate (Urban).—The urban rate 34·18 is still on the up grade. It shows an increase of 0·15 compared with the previous year and 0·91 compared with the five-year mean. Thirty-seven out of the 75 towns whose figures are included in the main statements record rates above the current years' provincial mean and 42 above their respective rates for the previous year. The highest rates during the year have been recorded in Mandalay 57·36, Lashio 54·76, Mawlaik 52·24, Maymyo 50·89, Taungdwingyi 50·13, Shwebo 49·18, Taunggyi 48·08 and Myinmu 45·74. Anybody going through this list may be struck by the fact that none of the towns in Lower Burma record rates high enough to be included therein. While it is true that the above high rates have to a great extent to be attributed to efficiency in registration, there is no doubt that the disparity in the sex composition of the population in the towns of Lower Burma has played its part in yielding the low birth rates. This will be evident from the fact that the number of males per 100 females in Lower Burma towns is 163 compared with 116 in Upper Burma towns. Apart from cantonments the towns recording the lowest rates are Thingangyun 19·04, Akyab 21·29, Sandoway 23·83, Thamaing 24·09, Letpadan 25·33, Insein 26·26, Paungdè 26·41, Pyapôn 26·58 and Chauk 26·97. Thingangyun and Thamaing are two of the four notified areas adjoining Rangoon, where registration is carried out by village headmen on a remuneration of annas four per entry recorded. A whole time health officer has been appointed for these four towns after the close of the year and it should be his first duty to improve the registration in his areas by applying the usual checks and by a change of agency, if necessary. A low birth rate is to be expected in Akyab, Insein and Chauk, where there is a great preponderance of males in the population. In the case of Sandoway, Letpadan, Paungdè and Pyapôn, registration work does not seem to have been done properly.

Death Rate (Rural).—The rural death rate 24·41 is the highest since 1921. It is 0·78 above the previous year and 4·33 in excess of the five-year mean. As the village headmen are the registrars of deaths, it is not possible to expect anything but the most general classification of diseases from them. Any rise in temperature is likely to be returned as fever and some of them insert the Burmese equivalents of children's disease, old man's disease, etc., as causes of death. This year plague

accounted for 1,854 more deaths than in 1937, fevers 686, injuries 129, respiratory diseases 125 and all other causes 9,296. Under the last item is grouped all deaths which headmen cannot ascribe to one or other of the principal diseases with which they are familiar. Most of the infant deaths come under this category. The disease groups recording less mortality were cholera—2,332 and smallpox—653. Thirteen districts have recorded rates above the provincial rural rate this year and 18, more than their respective rates for the previous year. High death rates have been returned from Shwebo, Thayetmyo, Yamèthin, Sagaing and Kyauksè districts. In the first four districts the birth rates are high and there is also a considerable excess of births over deaths in each, thereby indicating that the high mortality rates are due to good work in registration. The same cannot be said of Kyauksè district, where in spite of the absence of epidemic diseases there is a rise of 6·05 in the death rate over the previous year while the birth rate remained more or less stationary. Of the total deaths in the district 50 per cent are ascribed to fevers and 43 per cent to "all other causes." Malaria seems to have increased in virulence during the year, swelling up the infant death rate as well. On the other end of the scale are the districts of Thatôn, Myingyan, Kyaukpyu, Amherst and Mergui, which record rates below 20 per mille. These rates seem to be more indicative of defective registration than of the comparative healthiness of the localities.

Death Rate (Urban).—The rate is 35·75, which is an increase of 2·41 over the previous year and 5·43 over the five-year mean. For the first time since 1931 there has been an excess of deaths over births recorded in urban areas. As a medical man verifies the causes of death in almost all towns more reliable and detailed statistics are available about the terminal illness of the people who died. The principal diseases causing the highest mortality in towns during 1938 were infantile diseases (convulsions, malnutrition and debility, premature births) 9,171, pneumonia 4,685, general debility and anæmia 3,862, respiratory diseases excluding pneumonia, phthisis and whooping cough 3,414, malaria 2,978, pulmonary tuberculosis 2,757, old age 2,386, diseases of the digestive system 2,384 and diseases of the circulatory system 2,147. Thirty-three out of 75 towns record rates above the provincial mean and 49, higher than their respective rates for the previous year. The highest rates in 1938 were recorded in Taungdwingyi 59·12, Pyawbwe 57·76, Pakôkku 54·08, Lashio 52·61, Meiktila 50·51, Shwedaung 50·43, Prome 49·27, Kyauksè 49·23 and Myingyan 49·22. Taungdwingyi has been recording a high infant mortality rate and this year an outbreak of plague was responsible for 52 deaths. In Pyawbwe, besides a rise in the incidence of plague, there is an increase of 66 deaths under fevers. The rise in mortality in Pakôkku, Meiktila and

Myingyan was chiefly due to plague. On the other hand Shwedaung experienced a severe outbreak of malaria. In Prome the number of deaths ascribed to respiratory diseases especially among children is very high. Lashio was free from epidemics but had an all round increase in the incidence of the other diseases. Excluding cantonments the towns recording the lowest rates are Kyaukpyu 11·58, Minbya 18·27, Myitnge 18·83, Nattalin 19·88, Ye-U 20·33 and Sandoway 21·62. Taking into consideration the fact that it is more difficult to conceal a death than a birth, especially in towns where byelaws regulating the burning or burial of dead bodies have been framed and caretakers appointed for the cemeteries, the above low rates should ordinarily be taken to indicate the healthiness of the localities unless other factors come into play. The absence of cemetery caretakers, however, at Kyaukpyu, Minbya, Sandoway, Ye-U and Nattalin militates against the accuracy of the rates recorded. In Myitnge a large proportion of the population being the employees in the Burma Railways Workshop are adults in the age period 25 to 40 among whom mortality rate is generally low.

CHAPTER III.

Principal Epidemic Diseases.

Major Epidemic Diseases.—In Burma the major epidemic diseases are cholera, plague and smallpox. These diseases are so well known that villagers are able to distinguish them easily and report their incidence to headmen. The improvement of sanitation and the protection of public health including the prevention of the spread of contagious and infectious diseases among human beings are the responsibilities of the local bodies both in rural and urban areas. While a few of the municipalities have a staff sufficient to tackle with an outbreak of epidemic disease, all the District Councils have to depend upon this Department for the provision of qualified medical personnel for taking the necessary preventive measures. The medical officers in charge of hospitals and dispensaries in the rural areas cannot be out on tour for long and hence the duty of performing prophylactic inoculations, disinfection and other preventive measures falls on the sub-assistant surgeons of this Department. The pay and allowances of these sub-assistant surgeons are recovered from the local bodies concerned for the actual period of employment on epidemic duty.

Cholera.—This disease was not prevalent very much during the year. The provincial death rate was 0·05, which is below the previous year by 0·24 and the five-year mean by 0·15. In previous years cholera was most severe during the period April to July but this year the

largest number of deaths was in the month of September. Three hundred and ninety-four out of the 586 deaths recorded during the year were in Toungoo district. The disease spread from Toungoo town to the rural areas towards the end of August and beginning of September and was responsible for 406 cases and 321 deaths, the townships worst affected being Oktwin and Pyu. The public health staff in the district was augmented by an Assistant District Health Officer and three sub-assistant surgeons of this Department who were put on epidemic duty to bring the outbreaks under control. Cholera cases occurred in sporadic form in almost all the townships in Pegu district and resulted in 73 attacks and 58 deaths. Preventive inoculations numbering 11,161 were performed by the public health staff.

Seventy out of the 106 deaths from cholera recorded in the urban areas were in Toungoo where the disease appeared in epidemic form, the cases in the other 11 towns being of a sporadic nature. The outbreak in Toungoo was of an explosive character as 96 attacks and 55 deaths were recorded during the short period of four weeks from the 17th August. By the end of September the disease died out. It is reported that owing to heavy downpour kutchas street drains were overflowing into the neighbouring flooded compounds in the north western portion of the town where cess pits were in use. The wells in the area were of a shallow surface type, not protected by parapet walls, platforms and drains. The water in the wells reached the adjoining ground level and thus became open to pollution. The second centre of infection was the congested and insanitary quarters mostly inhabited by coolies, rickshaw pullers and other low class people near the railway goods shed. Inoculation against cholera on a vast scale was organized and during the three weeks from the 25th August, 14,684 inoculations were performed, the total for the whole year being 15,647.

Plague.—The number of deaths due to plague this year is the highest since 1929 and the death rate 0·38 shows an increase of 0·25 compared with the previous year and 0·24 over the five year-mean. As in the the past, the previous year's outbreaks had their full sway in the first three months of the year, the largest number of deaths being recorded in the month of February. By April the disease died down, reaching almost the vanishing point in May. Sporadic cases, however, continued to occur in the next four months and the geneses of the next year's outbreaks were laid in October, after which there was a heavy rise in the incidence of this disease. It was widely prevalent in Mandalay, Magwe and Sagaing Divisions. Except for a fatal indigenous case in Kyaukpyu town, the Arakan Division was free from this disease, as also the districts of Pyapôn, Amherst, Tavoy and Mergui. In the Mandalay Division the districts worst affected were Meiktila,

Mandalay and Myingyan ; in the Magwe Division, Pakôkku district ; and in the Sagaing Division, Sagaing district . The number of deaths that took place in Meiktila is the highest on record for the district. Mahlaing township bore the brunt of the epidemic, which affected 120 villages and caused 697 deaths in the township. Meiktila township came next with 434 deaths. An Assistant District Health Officer and three sub-assistant surgeons were added to the District Health staff and each was placed in charge of a township. Deratization gangs were formed in Mahlaing township in the early part of the year and in the other three townships in the latter part. Some of the villagers appeared to have had recourse to voluntary evacuation. Inoculation was unfortunately not popular ; so also were measures for the destruction of rats. Sagaing district recorded 420 attacks and 322 deaths. Of these, 357 cases and 264 deaths were in Ngazun township and 63 cases and 58 deaths in Sagaing township. In addition to the usual preventive measures fumigation of rat holes was reported to have been done on an extensive scale. In Myingyan district 62 villages in five townships were affected. It is observed that though history of rat mortality was obtained in most cases the information was not received prior to the occurrence of human cases.

The rate for urban areas 1·37 is the highest since 1928. It shows a rise of 0·82 over the previous year and 0·69 over the five year mean. The towns most severely affected were Pakôkku 13·63, Pyawbwe 13·14, Meiktila 12·12, Nyaung-U 8·01, Gyobingauk 7·56, Taungdwingyi 6·24, Mandalay 5·88 and Magwe 4·75. The outbreak of plague in Pakôkku which started in the last week of October 1937 had its full sway in the first three months of the year when there were 341 attacks and 315 deaths. Only 4,198 inoculations were performed since October last and this for a population of 23,115, indicates that co-operation of the citizens in suppressing the epidemic was not forthcoming. The Deputy Commissioner, Pakôkku, remarks " Pakôkku is undoubtedly one of the dirtiest towns I have had the misfortune to live in though it is the second or the third largest town in Upper Burma." The Municipal Committee sanctioned in September 1938 the entertainment of 30 coolies to clean up the town and the main bazaar with a view to prevent such severe outbreaks. Plague broke out in Pyawbwe in the month of September and did not cease till the end of the year. The gross neglect of the misguided traders in concealing rat mortality till human deaths had occurred was solely responsible for the heavy incidence of the disease, namely 93 attacks and 76 deaths. For some years now, plague has become a matter of annual occurrence in this town and it will be impossible to eradicate it unless the people themselves realize the necessity of keeping the town clean and free from rodents. In Meiktila the disease appeared towards the end of July, starting as usual in the quarters round about the bazaar. A general

cleaning up of the bazaar was then made but by the time the bazaar was cleaned, plague had spread to many quarters in the town, and so a systematic clean up of the whole town had to be undertaken. A total of 4,390 people, roughly half of the population was inoculated against plague. In order to prevent the occurrence of plague in future, the Municipal Committee would be well advised to keep the special plague gang permanently so that the rat population in the town may be at a minimum and the bazaar cleaned and kept free of all encroachments. The disease broke out in epidemic form in Nyaung-U in the middle of December 1937 and continued up to the 11th March 1938, resulting in 69 attacks and 65 deaths during this year. All the cases were of the bubonic type. In Gyobingauk the outbreak started in January and died out by the end of March. In view of the occurrence of plague every year in the town, the Municipal Committee was advised to frame byelaws for the regulation of the storage of grain and their decision in the matter is awaited. Plague in Taungdwingyi dragged on from June to December 1938 with alternating lulls and exacerbations. At the commencement of the epidemic, a few cases with the contacts were segregated in temporary huts, but later on when the people began to come forward readily for inoculation, segregation in the camps was not insisted upon. Mandalay has paid its bi-annual toll of deaths which in the plague year 1937-38 totalled 824 and the consoling feature in this year's outbreak is that it is less by about 200 deaths than the 1933-34 epidemic. In the latter half of this year, the Municipal Committee approved and sanctioned the introduction of trapping work on a small scale. The Health Officer remarks "The results were encouraging as willing co-operation was found even in those quarters where strong opposition was anticipated. The successful introduction of this work and expected continuation on a bigger scale has increased the prospects of combating the next epidemic." In Magwe the epidemic which started in September 1937 continued till the 22nd March. The outbreak was reported from insanitary dwelling houses where ngapi, empty boxes and unnecessary articles were stored and these formed the breeding places for rats. Temporary huts inhabited by labourers near the steamer ghat were dismantled and shifted to some other site. The usual preventive measures such as disinfection, house cleaning, inoculation, trapping and cyanogassing were performed but the sanitation of the town still leaves much to be desired.

Smallpox.—The death rate from smallpox, 0·02, is the lowest for the past 22 years. It is below the previous year's figure by 0·09 and the five-year mean by 0·10. Mortality was reported from 19 out of 31 districts. The largest number of deaths took place in April and the least in October. Of the 254 deaths during the year 7·48 per cent were among children under one year, 13·39 among children above one but under ten years and the balance of 79·13 per cent among

persons over ten years, thereby indicating that the state of protection of adults is not yet complete. The rate for rural areas is 0.02 and only the districts of Akyab, Myingyan and Hanthawaddy returned more than 20 deaths each.

The rate for towns is 0.06, which is lower than the previous year by 0.33 and the five-year mean by 0.36. Of the seven towns from which deaths were reported from this disease, Pegu, Kamayut, Bassein and Myingyan recorded one death each. In Taunggyi an outbreak of smallpox started in April and continued up to the last week of May. There were 41 attacks with 13 deaths. The disease appeared in Maubin at the same time as in the adjacent rural areas, 10 attacks and 6 deaths having been recorded within the municipal limits. Considering the history of smallpox in Rangoon during the past few years it is satisfactory to note that the disease did not assume as great a proportion as one should expect, chiefly due to the energetic preventive measures adopted.

Measures directed against Epidemic Diseases.

Our knowledge about the causation and mode of spread of the above three epidemic diseases is so very complete that measures for their prevention could be effectively adopted if once the co-operation of the people were forthcoming. Before expecting co-operation it is, however, essential that the people should be educated on the necessity and value of the measures to be adopted. All the public health personnel have therefore been enjoined to carry out health education by means of lectures, group talks and distribution of pamphlets. Details of their work will be found elsewhere in the report.

Cholera.—The principal measures to be taken in bringing under control an outbreak of cholera are the protection of water supplies, the control of the sale of food and the immunization of the people with anti-cholera vaccine. The task of providing safe and sufficient water supplies in rural areas is one involving financial considerations. The first duty of the epidemic staff in visiting an infected area is therefore to chlorinate all wells, tanks and other sources of supply. The people are advised to take hot food and avoid unripe or overripe fruits. The sale of uncovered food is prohibited. The clothes and vomit of the patient are burnt or buried and his house disinfected. Through the influence of the headmen, all the people in the village are inoculated with anti-cholera vaccine. During the year a total of 116,754 inoculations were performed, of which 89,845 were in the rural and 26,909 in the urban areas. The number of inoculations performed last year was 467,679 and the decrease in the number by about 351,000 is, as is to be expected, due to the low incidence of the disease during the year.

Plague.—This disease is hard to tackle. Permanent anti-plague measures such as the sanitary administration of bazaars, the enforcement of building byelaws and the byelaws to regulate the storage of grain in godowns and private houses too often involve the renovation or erection at considerable expense of new markets, buildings and godowns. Further the apprehension is entertained in many quarters that a strict enforcement of rules and byelaws by the local bodies is likely to arouse popular disfavour. The sanitary condition of many markets is still unsatisfactory. To quote one instance, plague broke out in epidemic form in Meiktila town towards the end of July starting as usual in the quarters round about the bazaar. Though the bazaar was known to be the starting place of infection the public health staff without the backing of the Municipal Committee could not undertake its systematic cleaning. An appeal was made through the Deputy Commissioner to the President, Municipal Committee, explaining the necessity for the cleaning up of the bazaar. The President, Vice-President and some of the members of the Municipal Committee responded splendidly. They went to the bazaar and personally supervised the cleaning up, and had all encroachments on the floors and roofs removed. During the cleaning up as many as 73 dead rats were found, some under the seats of sellers. The periodical deratization of markets and the removal of all encroachments should be insisted upon by all Municipal Committees and District Councils, so that the rat population could be kept at minimum. The framing of byelaws to regulate the storage of grain and the insistence on the construction of rat proof godowns are two other factors which will go a long way in achieving this end. Where the market is beyond repair, a new layout with detailed plans should be drawn up in consultation with the public health and engineering authorities and the construction be, if necessary, spread over a period of years.

The destruction of rats and the offer of preventive inoculation and early evacuation are some of the principal temporary measures that are adopted at the outset of an epidemic. As rat mortality always precedes human cases the early notification of ratfall will be of help to the local health authorities in putting into operation the above temporary measures. Evacuation to be effective must be made under strict supervision. Extensive use has been made of cyanogas for fumigating rat holes both in the urban and rural areas. In Mandalay Municipality it is reported that 135,592 visits were made to premises and that rat holes were detected in 11,506 homes. A total of 30,844 rat holes were fumigated with cyanogas and 62,563 connecting holes were blocked. In the rural areas in Sagaing district, it is stated that 7,598 houses were inspected and 4,852 rat holes were gassed and 7,245 rat holes blocked. The destruction of rats was also carried out by trapping and smoking and by these methods 688,252 rats were reported to have been killed,

27,914 in the rural and 660,338 in the urban areas. The number of anti-plague inoculations performed during the year was 245,809* (124,483), of which 147,364 were done in villages and 98,445 in towns. The increase in the number of inoculations is no doubt due to the severity and more extensive prevalence of plague during the year. In the last year's report mention has been made of the experiments which were then being carried out for having the roofs in village houses constructed in such a way that they may reduce the factor of rat harbourage to a minimum. A set of instructions for the guidance of villagers on this subject is being drawn up.

Smallpox.—Smallpox can be easily prevented by vaccination. The immunity conferred by a primary vaccination begins to wane after a period of years, so that a person cannot be said to have been protected unless he has himself revaccinated at intervals. The vaccination law in this country gives power to local bodies to frame rules for the compulsory revaccination of people in their areas. So far 26 out of the 28 District Councils and 58 out of the 77 Municipal and Town Committees in the country have framed such rules. The people have fully realized the value of this measure as a preventive against smallpox and readily come forward for vaccination and revaccination whenever appealed to. A special report showing the state of vaccination in this country is published as Appendix A to this Report.

Minor Epidemic Diseases.

These include enteric fever, dysentery and diarrhoea, respiratory diseases, beri-beri and cerebrospinal meningitis.

Enteric Fever.—This is a notifiable disease in all towns in Burma. The Health Officer has to depend mainly on private practitioners and doctors in charge of hospitals to furnish him with information regarding morbidity. Apart from admissions into hospitals, the number of cases reported by medical practitioners are far and few between. It is not therefore possible to furnish the number of persons down with this disease. With regard to deaths, the Health Officer or Medical Registrar has in most cases to rely on the history given by the relatives of dead persons and on the examination of dead bodies. Under the circumstances the mortality figures can at best be taken to indicate only the relative prevalence of the disease.

During 1938, 451 deaths were recorded and the death rate of 0·32 is less than the previous year by 0·01. Very high rates were recorded in Kyauksè 2·31, Allanmyo 1·92, Yandoon 1·51 and Myinmu 1·38. All these towns have no protected water supply.

* The figure in brackets refers to the previous year.

Dysentery and Diarrhoea.—These accounted for 6,400 deaths during the year. The death rate is 0·53, which represents a decrease of 0·05 below the previous year but an excess of 0·05 compared with the five-year mean. The largest number of deaths took place in the month of July and the least in March. As in past years the Irrawaddy and Pegu Divisions recorded a very large number of deaths. In these Delta areas the sources of water supply are shallow wells, tanks and *chaungs* and they are open to pollution during the monsoon, when there is a rise in the level of the subsoil water. Reduction in mortality can only be anticipated when extensive provision has been made of safer water supply in the rural areas. The districts recording a high rate are Pyapôn, Akyab, Kyauksè and Tavoy. It is reported that in Bhamo district dysentery broke out in epidemic form in Latawphakum village tract in Sinlumkaba Hill Tract in the months of July and August. There were 42 cases with 20 deaths. The sub-assistant surgeon on epidemic duty in the district was sent to the affected places and he took all possible preventive measures including the administration of anti-dysenteric serum.

Respiratory Diseases.—The number of deaths ascribed to this group of diseases is 14,297 and the death rate of 1·18 shows a rise of 0·03 compared with the previous year and 0·11 compared with the five-year mean. The rate for rural areas is 0·32 and that for towns is 7·70. Of the 10,871 deaths recorded in towns under this head, 4,685 were ascribed to pneumonia, 2,757 to pulmonary tuberculosis, 15 to whooping cough and the balance to other respiratory diseases. These figures indicate that pneumonia and pulmonary tuberculosis were responsible for the major portion of the deaths. The measures taken to combat tuberculosis are described in another part of this report.

Beri-Beri.—From the reports on hand it is evident that there has been a marked rise in the incidence of this disease during the year. Outbreaks in mild epidemic form occurred in Maubin, Myaungmya, Toungoo and Bhamo districts. In Maubin district 20 cases were reported from Pantanaw township and one from Maubin township in December. At the request of the Deputy Commissioner, Myaungmya, the Civil Surgeon, Myaungmya district, proceeded to Sabayo village in Wakèma township and examined 18 patients. In Toungoo district 22 cases with 18 deaths were reported from Songon, Donsayit and Kwinsejk villages in Shwegyin township. The villagers were advised to take atta, marmite and fresh vegetables by the local Health Officer. In Bhamo district it is stated that beri-beri cases were detected in many villages of the riverine area, probably due to consumption of water-soaked rice stored up for the year. The disease occurs almost every year among the Telegu labourers working in mines and plantations in Mergui district, and among the employees working in forest

camps in Upper Chindwin and other districts. It is interesting to note that the disease which was confined to Indian labourers previously is now appearing among Burman and Karen field labourers. It appears at a time when this class is engaged in strenuous labour and subsides at harvest season when more food is available.

The total number of deaths recorded from this cause in towns was 460 and the rate 0·33 is the highest for the past nine years. The Health Officer, Rangoon Corporation, reported 534 attacks and 265 deaths. The disease was mostly confined to the Indian community, the Telegus from South India being more prone to beri-beri and the Mohammedans from Bengal and Chittagong to epidemic dropsy. Other towns recording a large number of deaths were Moulmein 34, Nyaunglebin 32 and Mergui 26.

Cerebrospinal Meningitis.—Reports were received about the continued prevalence of this disease in the early part of the year in the Haka subdivision in the Chin Hills district. Cases occurred in three villages. In the Upper Chindwin district 6 cases with 6 deaths were reported from Layshi village in Somra tract. The situation needs watching.

In the towns of Burma 51 deaths were recorded, of which 39 were in Rangoon.

CHAPTER IV.

The Principal Diseases, Non-Epidemic in Burma.

Malaria.—Burma like other tropical countries has its problem of malaria to contend with. The disease is extensively prevalent and causes much sickness and mortality especially in the rural areas. Unfortunately we have no reliable data to gauge its prevalence in villages, where the headmen who act as registrars cannot differentiate the various kinds of fevers. From blood counts and spleen censuses taken in various places in Burma, the Malaria Bureau, at the Harcourt Butler Institute of Public Health has been able to distinguish regions where malaria is endemic from regions where it is only slightly prevalent. In the year under report fevers accounted for 38·39 per cent of the total mortality. In the opinion of public health and medical officers, who have opportunities to observe the mortality caused by malaria, half the deaths ascribed to fevers in rural areas may be taken to be due to malaria. On this basis, approximately 57,000 deaths in villages this year were due to malaria. The following remarks about the high prevalence of malaria in certain districts are taken from annual reports :—

PROME.—During the last quarter of the year a high incidence of malaria was reported from Prome, Padaung and Shwedaung townships and the epidemic sub-assistant surgeon visited the affected areas.

The sick persons were examined, blood specimens for malaria, typhoid and typhus taken, and cinchona febrifuge tablets were distributed. The breeding places for mosquitoes were searched for, spleen census taken and the general state of health was investigated.

HENZADA.—The following hospital statistics show that the incidence of malaria in the district was very much greater than in 1937 :—

			1937.	1938.
Kyangin	...	...	1,116	1,894
Myanaung	...	...	1,479	1,673
Kanaung	...	...	450	885
Ingabu	...	...	2,280	3,592
Lemyethna	...	...	970	1,339
Henzada	...	...	1,949	7,585
Zalun	...	...	787	2,598

It is encouraging to note that there is also an increase in the sale of cinchona febrifuge tablets in the district from 965 packets in 1937 to 2,220 this year and the popularity of the drug may in part be due to the liberal free distribution made by Government in previous years.

SHWEBO.—The principal focus is the Kyunhla region in the north-west of the district. This is a remote place far from any medical centre and is difficult of access. There was an unusually high incidence of malaria in 11 villages, in Tabayin township in Ye-U Subdivision.

UPPER CHINDWIN DISTRICT.—The whole of the district is malarious. There are many places where the spleen index is over 50 per cent. The malignant tertian is the predominant type. Fatal cases of cerebral malaria and black water fever are fairly common. Kalembo, Pantha, Tamu with Kabaw valley, Indaw and Homalin are among the most notorious malarious places.

The number of deaths recorded under malaria in towns was 2,978 and this number is the highest since the year 1920, when separate figures for this disease were available for the first time. This year's rate 2·11 shows an increase of 0·46 above the previous year and 0·82 compared with the five-year mean. The period October to January is the general malaria season in this country and as in previous years, the largest number of deaths has been recorded in the month of December. The towns returning the highest rates are Shwedaung 22·36, Lashio 17·68, Mawlaik 14·05, Minbya 10·25, Myitkyina 8·87, Myanaung 8·82, Bhamo 8·74 and Tavoy 8·27. Shwedaung had an outbreak of malaria on an unprecedented scale. The largest number of deaths were recorded in December during which month the average attendance at the civil hospital increased to 213, the figure for the corresponding month of the previous year being 100. The Health Officer points out that the most heavily infected areas were near the river side where bamboo floats were

in abundant evidence, at the outskirts of the town in the north and south and also in the area north of Kalachaung running in the centre of the town from east to west. Arrangements were made after the close of the year to have an investigation into the incidence of malaria in this town by the Malaria Bureau. Malaria is the principal cause of illness in Lashio. All the clinical types of the disease are met with from the ordinary ague and febrile attack to the various forms of pernicious, cerebral, algid and choleraic varieties. Fresh infections reach their full peak during the monsoons and relapses are common during the cold weather. In Mawlaik the quarters affected according to their severity are the Naungpula, Military lines, Thayetkon, Ohnebok, clerks' and main bazaar quarters, the prevalence of malaria being in the direct proportion to the swampy area present in or about the quarters. The Malariologist paid a visit to this town in June 1938 and has given instructions for carrying out anti-malarial measures. The posting of a sub-assistant surgeon specially trained on anti-malaria work for carrying out the Malariologist's instructions is under consideration. The presence of malaria in Myitkyina is mainly attributed to the existence of the Sitapur Nullah and in Bhamo to the Imperial lake. The high rates recorded in Myanaung and Tavoy need expert investigation.

The Control of Malaria.—For the control of malaria a detailed knowledge of the species and habitat of the carrier anophelines is one of the first essentials. The Central Malaria Bureau has since 1927 been collecting information on this subject. The officers of the Bureau have carried out malaria surveys in various parts of Burma and suggested measures for eradicating the local species incriminated in the spread of the disease. As a result of such surveys systematic anti-malaria measures have been carried out in Akyab, Kyaukpyu, Lashio and Maymyo.

In Akyab the reclamation of Peeleegong brick-field with town refuse was continued and the work is nearing completion. A big ditch with stagnant collection of water, which was a permanent source of mosquito nuisance, has been completely filled up. All important creeks, including the Jalia creek, Jail creek, Khamoung creek and other small creeks in Lammadaw, Singulan and Civil Station areas were cleared of rank vegetation, their edges trimmed and beds corrected. Several low-lying lands in private compounds were reclaimed with town refuse and many surface drains and pools with stagnant collections of water which could not be drained off or otherwise dealt with were treated with Malariol. As a result of the anti-malaria work carried out since 1927, the number of deaths from fevers have been considerably reduced from 246 in 1927 to 53 this year.

At Kyaukpyu *A. annularis* is the main carrier, although a few other species play a smaller part in the spread of malaria. Work was therefore concentrated on the breeding places of *annularis*, these being

mainly shallow and shady pools with growth of algae and reeds and where the water collection is more of a swampy nature. The principal permanent measures carried out during the year consisted of the reclamation of the swampy area between Zedidaung and the outskirts of the town by dumping and spreading town refuse in the area, reclamation of low and swampy places in the foreshore near the bazaar and the Thanbanchaung quarter, reclamation of two plots of land near Companze resulting in their conversion into good cultivable land, reclamation of the marshy land at the site of the old sweeper's quarters and of a large swamp on the side of the embankment near Ngalapwe village. Temporary measures adopted included the cleaning, grading and dredging of drains and channels, uprooting and clearing scrub jungle and rank vegetation and spraying Malariol and Paris green in areas where permanent measures could not be adopted. The latest spleen census gives a spleen index of 2.75. The spleen index in 1931 was 31.25. The Anti-malarial Committee, which guides the anti-malarial operations, is to be congratulated on another year's good work.

In Lashio malaria is the chief prevailing disease and to its effects can be attributed a large proportion of the mortality. The vectors which were incriminated with the spread of malaria are *A. maculatus* and *A. minimus*. With the abolition of borrow pits and paddy fields *A. minimus* has, however, been practically eliminated. The nature of the ground on which Lashio and the surrounding villages are built favours the spread of the disease. The terrain is scoured with ravines and there are low-lying areas where seepage water tends to accumulate. An epidemic sub-assistant surgeon concentrates most of his attention on malaria during the monsoons. From June to November a party consisting of one maistry and twelve coolies are employed for jungle clearing, drain cutting, filling up hollows in various parts of the town and obliterating rocky saucer-like depressions where anopheles breed. In addition, two larvae catchers and one attendant for spraying oil were employed throughout the year. A contour drain was constructed in Ravine No. 3 at a cost of Rs. 1,488 and sub-soil drainage with bamboo pipes has been provided with satisfactory results. Lashio town for purposes of anti-malarial measures is divided into a protected or town area and an unprotected or rural area. The spleen rate in the protected area in the month of June was 14.29, and in the unprotected area 47.19.

In Maymyo measures for the control of malaria are being carried out under the guidance of a committee with the Health Officer as the Honorary Secretary. One public health inspector and four mates were sanctioned by the Municipal Committee for carrying out the necessary measures and during the year 55 borrow pits, 10 herring bone drains, 26 buffalo wallows and depressions having a total surface of 9,210 square feet were reclaimed with town refuse and earth. The dumping of green leaves as a naturalistic method of malaria control and the

clearing of aquatic vegetation in the drains and ponds were carried out. According to the nature of the breeding places recourse was had either to the spraying of Malariol or the dusting of Paris green. As a result of all these measures the number of larvae available for collection has been reduced greatly. In 1934 it was about 187,500 and in 1938 7,974.

Anti-malarial operations on a small scale were started in Sandoway town as advised in the malaria survey report. A sub-assistant surgeon of the Public Health Department was deputed to supervise the work and the Municipal Committee appointed two coolies to assist him.

A certain amount of anti-malaria operations were also reported to have been carried out at Insein, Syriam, Bhamo and Myitkyina.

Malaria Control by Fish.—Organized anti-malaria measures are costly and cannot be undertaken by the villagers. The central Government and the rural local bodies are still not in a position to budget for such expenditure. Malaria is, however, more prevalent in villages than in towns and hence some sort of action is essential at least to alleviate the suffering. This Department has since 1936 been putting into operation a programme for the control of mosquito breeding through larvivorous fish. A central hatchery was constructed in the Harcourt Butler Institute of Public Health, Rangoon, and a species of small larvivorous fish known as *Gambusia affinis* is reared at the hatchery. During the year 26,456 of this fish were distributed to 17 districts. Subsidiary hatcheries have been constructed at Yamèthin, Shwebo, Magwe, Myaungmya, Mandalay, Bassein, Tavoy, Thayetmyo, Mergui, Akyab, Prome, Minbu, Thatôn, Henzada, Lashio and Myitkyina. The idea is to have the fish reared at the headquarters of districts which have a high incidence of malaria, so that the public health staff could easily transmit the fish from the district hatchery to the village tanks and ponds. The central hatchery is supplying the subsidiary hatcheries with an initial stock to start the rearing.

Distribution of Cinchona Febrifuge and Quinine Tablets.—The Inter-governmental Conference of Far Eastern Countries on Rural Hygiene held in Java in August 1937 has made the following remarks about the distribution of anti-malaria drugs :—"The Conference is in agreement that the first responsibility of the Government in any malaria campaign is to save from death and relieve from physical distress the malarious sick by making anti-malarial treatment readily available. It subscribes, therefore, to the opinions expressed by the Malaria Commission of the League of Nations in its second report (1927) that the treatment of the malarious sick is the first step in any malaria policy and that 'wide distribution of quinine is a public duty which, whenever and wherever necessary, should be

organized and paid for by the State.' The Conference is also in agreement that, during malaria epidemics, it is the responsibility of a central Government to make free treatment available to all; that, in ordinary times, where malaria is prevalent, free treatment should be provided for those who cannot pay.' In the past two years a very large quantity of cinchona derivatives was available for free distribution, first through a gift of 5,000 lbs. of quinine sulphate made by the Government of India to this country from their surplus stock and secondly by a provision of Rs. 90,000 made for the purchase of cinchona febrifuge powder from out of the grant for rural uplift work. The 5,000 lbs. of quinine sulphate were converted into tablets and distributed by the last week of April 1937, when the free distribution of tablets manufactured from 5,100 lbs. of cinchona febrifuge powder purchased from the Rural Uplift Grant was started. This too was finished by the end of April 1938 and the balance of 4,900 lbs. of cinchona febrifuge powder purchased from the Rural Uplift Grant was then converted into tablets and free distribution started from May 1938. This year a total of 8,449,380 tablets were distributed free. The districts in which specially large free distributions were made included the Southern Shan States, Katha, the Northern Shan States, Bassein, Myitkyina, Upper Chindwin and Bhamo. By the end of November 1938 it was realized that the balance of cinchona febrifuge tablets available for free distribution was getting very low and a check had therefore to be applied for lowering the pace at which the drug was distributed. With the permission of Government a circular letter was issued to all concerned laying down that these tablets should henceforth be distributed to actual sufferers in villages where the people are so poor as to be unable to purchase them and that in cases of widespread attacks of malarial fever discretion was given to the Deputy Commissioners and District Health Officers to order the distribution. With due consideration to the financial stringency of the country, Government has been pleased to sanction a small allotment for the purchase of cinchona febrifuge tablets for free distribution in the ensuing two years, so that the scheme for the liberal supply of the drug may be brought to an end gradually.

It was expected that as a result of the extensive free distribution people will begin to appreciate the value of the drug both as a preventive and as a cure to an attack of malaria. The sale of cinchona febrifuge tablets through the agency of licensed vendors, who obtained their supplies from the local treasuries, was continued. This year a total of 4,564,260 (4,086,720) tablets were sold. The sales in the year 1936, when the scheme for extensive free distribution was inaugurated was 3,554,100. Large sales of cinchona febrifuge tablets are reported from the Southern Shan States, Northern Shan States, Pegu, Henzada and Toungoo.

The rate of consumption of cinchona febrifuge per head of population shows a slight reduction, from 4·04 grains in 1937 to 3·65 in the current year and this has to be ascribed mainly to the check on the large scale free distribution exercised by this Department since the month of November. The largest consumption, *viz.*, 19·78 grains was in Bhamo district, followed by 13·32 grains and 12·73 grains in Myitkyina and Salween districts respectively. The highest fever death rate, 16·76, was recorded in Shwebo district but the consumption of cinchona febrifuge per head of population in that district is only 1·77 grains.

Venereal Diseases—Even in advanced Western Countries this group of diseases is the last to be dealt with by modern methods of public health. The ease with which the cases can be concealed and the innate aversion of the sufferers to any publicity are two of the main factors, which stand in the way of tackling this problem. Here in Burma the data for gauging the prevalence of these diseases are meagre. During 1938, 74,726 persons were treated for venereal diseases, of whom 33,962 were suffering from syphilis and 26,278 from gonococcal infection, the remainder having other diseases of venereal origin. The number of deaths that took place in hospitals from syphilis and gonorrhoea were 69 and 11 respectively, and the number of deaths that were recorded in towns on account of these two conditions were 325 and 21 respectively. In the Rangoon General Hospital out of 906 post mortem examinations performed during the year pathological signs of syphilis were detected in 83 cases. Again, among the 2,031 women admitted into the four centres of the Maternity and Infant Welfare Society, Rangoon, venereal infection is reported to have been traced in 451 cases. These are the only statistics available in respect of this group of diseases and on going through them one is no wiser than at the start. In the opinion of Medical and Health Officers, these diseases do constitute a serious problem. Facilities for the treatment of venereal diseases among sea-men are provided at the Ramakrishna Mission Sevashram and at the General Hospital, Rangoon, and at the General Hospitals in Bassein, Akyab and Moulmein. Special centres for the treatment of these diseases have been provided in 22 other hospitals.

The Defence Department has viewed with concern the symptoms of physical degeneration which has occurred of recent years amongst Kachins, as this community supplies a considerable proportion of the recruits for the Burma Army. One of the causes for this degeneration has been suspected to be the extensive prevalence of venereal diseases amongst this community. There is no doubt that propaganda is required to educate this community on the evils caused by venereal diseases and with this end in view a few of the pamphlets of this

Department dealing with venereal diseases have been translated into the Kachin language, for distribution in Bhamo and Myitkyina districts.

Leprosy.—The number of deaths due to leprosy in towns during 1938 was 353, the rate being 0·25. By far the largest number was recorded in Rangoon 136, Mandalay 59 and Moulmein 20. The existence of leper asylums in these places has been mainly responsible for the large number recorded. The disease is made notifiable only in Maymyo and Mònywa Municipalities; hence there are no reliable statistics to judge its incidence in urban areas; and in respect of rural areas even mortality figures are not available.

One has therefore to turn to other sources for obtaining an idea as to the prevalence of this disease. According to the last census report there were 11,127 lepers in Burma, which gives a rate of 0·76 per 1,000 population. This is clearly an underestimate, as the enumeration was made by laymen who had no special knowledge in diagnosing leprosy. Since the appointment of the Special Leprosy Officer, surveys on a fairly large scale were carried out by him in three areas and as a result of the surveys it was discovered that 16·49 per thousand of the population examined were affected. If this ratio were to be applicable to the whole of Burma, it will mean that there are 242,000 lepers for whom medical and other facilities will have to be provided. The areas surveyed were, however, not typical as it was previously known that leprosy was relatively more prevalent in the areas surveyed than in the other districts. Hence it would appear to be reasonable to accept a figure of 150,000 as representing, as accurately as possible with our present knowledge, the total number of lepers in Burma.

As a result of the appeal issued by His Excellency the Governor of Burma in December 1937, a Central Association with a strong and influential Executive Committee was formed with the object of controlling tuberculosis and leprosy. Up till the end of the year a sum of Rs. 4,50,681-7-11 has been collected and vested in a Board of Trustees. This sum is very small for carrying out any effective measures for the suppression of the above two diseases and it is hoped that when the Committee formulates its programme of work and gives it out for the people to judge, especially the magnitude of the task involved, more and more funds will be forthcoming.

The Director of Public Health, Burma, furnished the Association with an outline of work for combating leprosy. The services of an expert in the person of Dr. J. Lowe, M.D., Leprosy Research Worker of the Indian Council of the British Empire Leprosy Relief Association, were obtained, so that he may study the problem and give the benefit of his advice. Dr. J. Lowe arrived in Burma on the 15th July and carried out his investigations in the different parts of the country for

over three weeks and submitted an interesting report, with proposals for work in the near future.

His report has thrown valuable light on the distribution and incidence of leprosy in Burma. From a study of statistics and other records he remarks that there is probably a belt of country showing a high incidence of leprosy extending across the middle of the province starting with the Chin Hills and Hill Tracts of Arakan and Akyab in the west including most of the southern part of Upper Burma and finishing with the Southern Shan States in the east. A second zone showing a moderately high incidence of leprosy is in the Delta, the northern part of Burma showing relatively little leprosy, and the coastal areas showing still less. The type distribution of cases in Burmans differs markedly from that of Indians domiciled in Burma or India and that in Burmans cases of infectious or lepromatous type form a much higher proportion of the total. The high percentage of children infected with leprosy points to the fact that the disease is spreading. His main recommendations are that the existing leper colonies should be developed and new ones established, the isolation of lepers inside the village instead of outside should be encouraged, suitable propaganda materials should be prepared and distributed, anti-leprosy committees should be formed in highly infectious parts of the country, a more thorough study of the incidence and distribution of leprosy should be made, the methods of leprosy control by the isolation of infectious cases in villages or in the neighbouring colony should be closely studied over a period of years for judging the results obtained, and lastly the various agencies interested in leprosy should co-ordinate their efforts and have a uniform policy carried out by a consultative body in which all interests are represented. On receipt of Dr. J. Lowe's report, the Executive Committee of the Association appointed an *ad hoc* Committee consisting of two representatives each of the Association, two of the Burma Branch of the British Empire Leprosy Relief Association and two from Government to study the report and make definite recommendations for tackling the leprosy problem. The report of the *ad hoc* Committee is now under the consideration of Government.

Colonies for the housing and treatment of lepers were continued at Môngywa, Minbu, Meiktila, Sale, Magwe and Kengtung. New colonies were started at Shwebo by a local association and at Loilem by a Christian Mission. Most of the colonies have clinics attached to them in which leper patients both indoor and outdoor were treated by specially trained doctors on specified days every week. The voluntary leper village settlement at Nyaunglun in Yamèthin district was converted into a regular colony with a clinic attached to it. Arrangements were also in progress to open colonies at Bhamo, Thayetmyo, Myingyan, Thatôn and Insein districts. The Môngywa colony which is the first of its kind in this country has accommodation for 88 patients,

but actually 97 inmates lived there during the year. A proposal is at present under the consideration of Government to expand the colony to accommodate 500 inmates and to detail a wholetime sub-assistant surgeon to look after the colony. In the Minbu colony there were 37 inmates at the close of the year, in Meiktila 24 and in Sale 12. The two huts in the Magwe colony were found insufficient and three more, with accommodation for 12 lepers in each, were constructed and there were 64 in-patients during the year. In the Shwebo colony two bamboo matting barracks with 8 rooms in each were built and 71 lepers admitted of whom 40 remained at the end of the year. The colony managed by the Roman Catholic Mission at Kengtung had 132 in-patients and colonies numbering 8 managed by the American Baptist Shan Mission in the Kengtung State had 739 leper inmates. The Loilem colony was opened in May. It had 106 admissions of whom only 60 remained at the close of the year. Many left the colony without permission when they were relieved of some of their symptoms. In all these colonies the lepers were encouraged to do manual labour such as kitchen gardening, or the raising of peas and beans, so that they may contribute towards the expenses of their upkeep. Facilities for the treatment of lepers were provided in 32 places where clinics were held by doctors having special training in the treatment of the disease. The reports indicate that over 2,100 lepers received treatment at these centres. Special mention may be made of the clinic at Shwebo, where 483 patients, old and new, received treatment. The other clinics where comparatively large attendances were recorded are Mônywa, Minbu, Meiktila, Ye-U, Wakèma and Kyonmange.

The Special Leprosy Officer conducted his annual course of lectures and demonstrations on leprosy to the senior students of the Burma Medical School and College in November 1938. Six sub-assistant surgeons of the Medical Department and one Medical Assistant deputed by the Moulmein Leper Asylum were given by him a course of training in the special treatment of leprosy. In the first quarter of the year he concentrated his activities in Meiktila district for the sound establishment of the Meiktila leper colony and for maintaining the popularity of the leprosy clinics in Meiktila, Mahlaing, Thazi and Wundwin. With a view to advising local officers on the selection of sites and other matters for the establishment of leper colonies he visited Thayetmyo, Allanmyo, Magwe, Sagaing, Myingyan, Nyaung-U, Thatôn and Insein. He accompanied Dr. J. Lowe in his tour of investigation in Burma. In order to judge the incidence of leprosy in Henzada district, the Special Leprosy Officer visited Henzada, Myanaung and Kyangin and recommended the opening of leper clinics in the former two places. He also visited the leper colonies at Kengtung.

During the year under report 53,955 copies of pamphlets on the subject in English and Burmese were distributed.

Nineteen lepers from Indian ports landed at Rangoon during the year, of whom three were sent to the leper asylum and the rest allowed to go to their residences.

Eye Diseases.—In the last year's report a fair idea is given of the areas in which eye diseases are common and the total number of admissions into hospitals for opthalmic conditions. The demand for the supply of cheap tablets for treating minor complaints of the eye was becoming more and more frequent. The Deputy Inspectresses of Schools, Mandalay and Sagaing Circles, have for some years past been distributing the tablets to the school children in their jurisdictions with beneficial results. Demands for the supply of the drug were received from the District Health Officers, Lower Chindwin, Upper Chindwin, Bhamo, Mandalay, Minbu and other districts during the year. Permission of Government was therefore obtained to have these tablets stocked in district treasuries for supply to persons authorized by this Department. It is, however, considered that the time is not yet ripe for making detailed arrangements for the sale of this drug to the public through district treasuries.

Each tablet contains 3 grains boric acid, $1\frac{1}{2}$ grains zinc sulphate and $\frac{1}{2}$ grain starch, gum acacia and methylene blue. A packet contains 12 paper tubes of ten 5-grain tablets and costs annas four. During the year 736 packets costing Rs. 184 were supplied to District Health Officers and district treasuries for free distribution.

Tuberculosis.—It is not possible to judge the extent of prevalence of this disease in the rural areas but in towns 3,016 deaths were recorded under this head during the year. Of these, 2,757 were due to pulmonary tuberculosis, 9 to tuberculosis of joints and the rest to other tuberculous diseases.

The death rate from pulmonary tuberculosis has been steadily on the increase since the year 1920, when figures in respect of this disease were available for the first time. In 1920 it was 1·13, in 1927 1·64, in 1937 2·05 and this year 1·95. The towns which have returned the highest death rates are Myitkyina 4·37, Thôngwa 3·57, Danubyu 3·47, Tavoy 3·31, Moulmeingyun 3·23, Yandoon 3·22 and Yamèthin 3·12. The rate for Rangoon is 2·19.

The tuberculosis dispensary maintained by the Corporation of Rangoon continued to be popular. The attendances at the dispensary increased from 29,229 in 1937 to 34,206 this year of which 3,955 were new patients. Among these, 852 were diagnosed to be suffering from pulmonary tuberculosis, 30 from glandular tuberculosis, 21 from tuberculosis of other organs such as T. B. Peritonitis, T. B. of the spine, etc., and the remainder were from other diseases. Of the patients suffering from pulmonary tuberculosis 10 were in the first stage,

33 in the second and 809 in the third stage. The medical officer of the dispensary and the nurse made 4,050 home visits or 150 more than the previous year.

As has been mentioned in the previous year's report, in response to the Governor's appeal, the Burma Tuberculosis and Leprosy Relief Association was formed with the object of collecting funds and taking measures for stamping out the two diseases—tuberculosis and leprosy. In order that intensive interest in combating these diseases may be created all over the country the Central Committee appealed to all Commissioners and Deputy Commissioners to organize local associations in their respective jurisdictions and to have these affiliated to the Central Association. The response to this appeal was most encouraging as 25 District Associations had already been formed and affiliated to the Central Association and efforts were continued to be made to form similar associations in other districts.

The Burma Association approached the National Association for the Prevention of Tuberculosis, England, to make available the services of an expert to study the problem of tuberculosis in Burma and suggest measures for its control and elimination. The latter were kind enough to depute Professor S. Lyle Cummins, C.B., C.M.G., M.D., LL.D., late David Davis Professor of Tuberculosis of the Welsh National School of Medicine and Director of Research for the King Edward VII Welsh National Memorial Association (for tuberculosis) for this purpose. The Professor arrived in Burma on the 18th November and started his investigations.

Yaws.—From time to time evidence has been accumulating as to the areas in which this disease is rampant in Burma but measures for its eradication were not put into operation on an extensive scale on account of the cost involved in the treatment of cases. In Mergui district this disease is endemic in Victoria Point subdivision, Bokpyin township and in the interior of Tenasserim and Palaw townships. It occurs among Salons, Malays and Siamese and also among Burmans and Karens living in filthy conditions. For want of funds both in the District Council and the Deputy Commissioner's Local Fund, the work of survey and treatment of yaws in the district was suspended. The District Council, Mandalay, provided funds for the treatment of yaws cases and a sub-assistant surgeon was put in charge of the campaign. A large number of cases was found in Singu and Madaya townships. In Katha district yaws is fairly common in Tigyaing and Katha townships and in Wuntho subdivision. A sub-assistant surgeon was deputed by Government for six months for treating these cases. He started the work in November 1938 and his final report is awaited. In the Mogôk subdivision it is endemic in Letpangôn, Sezingôn and Zègôn villages of Thabeitkyin township. In the Upper Chindwin district 6,239 yaws

patients were treated by the sub-assistant surgeon on special duty. It is reported that after the first injection the sores disappeared in most cases and that a second injection after a week ensured a definite cure. In the Lower Chindwin district the disease is common in Kani and Budalin townships. A six months' campaign against yaws was finished in Kani township on the 31st March and another was started in Budalin township from the 1st December.

Goitre.—This disease manifests itself by an enlargement of the thyroid gland in both males and females. Its etiology is obscure but its prevalence in certain parts of Burma has been well known. It is common in Tilin, Saw, Gangaw and Pauk townships in Pakôkku district but very few seek treatment. In Myingyan district a number of cases were noticed in Popa village. A sub-assistant surgeon of this Department carried out an investigation into the prevalence of this disease in Salin township in Minbu district. He visited 45 goitre affected villages and examined 4,025 people, among whom 455 were found to be affected. The villages on both sides of the Saling *chaung* and Myenu *chaung*, in the west and north-western portion of the township recorded a high incidence. The heaviest rates of infection were found in villages with very bad sanitary conditions. The disease is prevalent in the hill tracts in Bhamo, Katha and Salween districts. In the Upper Chindwin district it is said to be common among the villagers drinking water from the hill streams. It is widespread in certain parts of the Northern Shan States. Kachins and Palaungs are the chief sufferers. In some of the villages everyone has an enlarged thyroid gland, myxoedema with mental deficiency being also met with. The villagers freely resort to hospitals and dispensaries for treatment as will be evident from the 6,638 admissions for this disease in the hospitals during the year. The District Health Officer remarks: "Clinical experience shows that improvement after ingestion of iodum or iodides lasts for three weeks only" In Kengtung subdivision in the Southern Shan States, where the disease is common, it is reported that the condition causes the sufferers very little or no inconvenience and that the victims do not generally seek treatment.

CHAPTER V.

Rural and Urban Sanitation.

Urban Sanitation.

General.—The essential features that distinguish an urban from a rural area are the amenities which the Municipal and Town Committees provide for the comfort and convenience of the people residing in their area. So far as public health is concerned these amenities take the form of the provision of a wholesome and protected

water supply, efficient disposal of rubbish and excreta, effective drainage to carry off sullage and waste and a well arranged and clean bazaar for the people to buy their provisions and other goods. These involve the entertainment of a suitable staff with a Health Officer to supervise their work. The Health Officer is by virtue of his education and training well qualified to enforce the various bye-laws relating to public health, especially those relating to buildings, lodging houses, markets, slaughter-houses, burial and burning grounds, bakeries and eating houses. An adequate budget provision for public health purposes, together with the active support of the Municipal Committee to the Health Officer in enforcing the various bye-laws without fear or favour are the main desiderata for improving the sanitary condition of a place ; but the attitude of Municipal and Town Committees in the majority of cases is one of *laissez faire*, in some of obstruction, and only in an enlightened few of active co-operation.

Water Supplies.—The provision of a wholesome and protected water supply is one of the primary functions of a local body. In respect to urban areas a protected supply is generally understood to mean a supply through pipe lines. Unfortunately this process is very costly both on account of the capital expenditure involved in bringing water to a central reservoir and distributing it through pipe lines, and on account of the annual recurring expenditure involved in the maintenance of plant and other equipment. Taking the fourteen major towns in Burma with a population of over 20,000 it is seen that a piped water supply is available only in seven.

In Moulmein with the installation of a boosting plant with a high pressure tank having a capacity of 50,000 gallons at the service cisterns, the Municipality is able to supply water for domestic use to the higher parts of the town including the civil line area up to the general hospital. To suit the public needs the town is divided into three sections each being boosted in turn for a limited number of hours. As the quantum of water available for distribution is not, however, sufficient, the Committee is finding other ways and means to improve the water supply. In Prome water is pumped directly from the river into an elevated tank of a capacity of 120,000 gallons and then distributed to the people of the town without being subjected to any means of purification. This is unsatisfactory. Investigations will therefore be made to find out if it is cheaper to have the river water filtered and purified than to obtain the supply from tube wells. In Bassein the scheme to supply drinking water by laying out pipes from the Municipal tube wells in the congested area of the town is taking final shape and it is hoped the work will commence during 1939. In Insein out of six tube wells only three are in working order. Tenders are being invited for carrying out the scheme for the supply of piped water to the bazaar from a tube well and it is hoped that the work will be completed before the

monsoons. The Committee has decided to renovate and fit one tube well with an automatic pump. If this proves adequate to supply water to the residents in that ward, the Committee contemplates fitting the other tube wells with automatic pumps. Toungoo with a population of 23,223 is in great need of a protected water supply. Cholera took a toll of 70 deaths during 1938 and dysentery and diarrhoea 77; enteric fever and other water borne diseases are on the increase in this town. In Magwe the chemical analysis of the 8" Municipal tube well has been persistently unsatisfactory. A scheme for the supply of river water is under consideration. Samples of water will be taken in April, May and June of the ensuing year to find out by analysis if the river water is suitable.

There was a breakdown in the pumping plant engines in Thayetmyo Municipality at the end of December 1938 and the Municipal Committee is taking action to renew them. In Thônzè the reservoir at the pumping station was replaced by one of bigger capacity, from 2,500 gallons to 12,800 gallons. An officer of the Sanitary Engineering Department carried out a survey for augmenting the water supply in Maymyo Municipality and his recommendations are now under consideration.

In Taunggyi a valve tower enabling a much larger quantity of water to pass from the reservoirs to the town and a storage tank of 80,000 gallons capacity between the Pamune Spring and the two reservoirs are under construction and it is hoped these improvements will enable a sufficient supply of water to be made to the inhabitants for the next decade.

The Government of Burma has sanctioned a special contribution of Rs. 2,000 for the extension of Kanthit tank in Yamèthin town. The Municipal Committee is taking action to acquire adjacent private lands and to lease State waste land from the Deputy Commissioner. The extension will be made as soon as the acquisition is completed. The Deputy Commissioner, Yamèthin, remarks: "A really adequate supply of drinking water is one of the town's most pressing needs. I feel that further efforts should be made to find water bearing strata."

Conservancy.—The removal of rubbish and excreta to be efficient should be done departmentally by Municipal and Town Committees. Some of the Committees, however, through a desire to effect economy or through some other cause, have the conservancy work given on contract. The experience of this Department, however, is that the work of the contractor is almost always unsatisfactory. During the year the Municipal Committees of Magwe, Pakòkku and Yamèthin have decided to carry out the removal of rubbish through their own agency and the Municipal Committees of Taungdwingyi and Henzada the removal of both rubbish and excreta

with their own personnel. In Magwe the term of day conservancy contract ceased on the 18th August and the Municipal Committee has decided to have the collection and removal of rubbish performed departmentally by motor transport at the instance of the Commissioner, Magwe Division. The Committee has purchased a two-ton Chevrolet motor lorry and hopes to make an annual saving of Rs. 1,000 by its introduction, the net approximate monthly expenditure being Rs. 100, as against Rs. 216 under the old contract system. In Pakôkku the Municipal Committee realizing the inefficiency of the work done by the contractor, entertained a staff of 20 cart men, 21 sweepers and 5 drain cleaners and arranged for the departmental removal of rubbish from the 10th March 1938. The contract for the removal of rubbish entered into by the Municipal Committee, Yamèthin, expired by the end of May of this year, since when rubbish has been removed in carts by the Municipal personnel. The Health Officer remarks that the introduction of carts has resulted in a saving of Rs. 135 per mensem or Rs. 1,620 per annum. In Taungdwingyi day and night conservancy work was done departmentally from the 1st April 1938. The new system is reported to be more efficient and satisfactory. In Henzada labour and equipment for both day and night conservancy were supplied departmentally and motor transport by contract. During the year the Municipal Committee, Prome, has taken the retrograde step of changing over from the departmental to the contract system of removal of excreta.

At Thônghwa a dumping tank for diluting the nightsoil before discharging it into the creek is being constructed at a cost of Rs. 4,640. After the tank has been built the Municipal Committee contemplates introducing the double bucket system of nightsoil removal. It is reported that in Moulmein the double bucket system which was introduced on an experimental basis in the 4th division had to be abandoned owing to heavy expenditure.

This department has been watching with concern that even in some of the large and old established municipalities the removal of nightsoil by municipal agency has not been made compulsory throughout their area. For example in Pakôkku the total number of buckets conserved is stated to be 968 whereas the total number of houses in the town is according to the 1931 census 4,840. In many parts of the town the insanitary pit system is in force and the Municipal Committee seems to have done practically nothing to have these substituted by buckets. In Paungdè only two out of the seven wards in the town have been brought under bucket conservancy. In Toungoo it is stated that the area under conservancy has remained as it was in the year 1910 and that there is an insistent demand from the inhabitants of Thagyaundaung, South Lake Road, Ogam and Myogyee quarters for extension of the night conservancy system to their areas. In

Mandalay the bucket system of removal of excreta at a reduced rate of taxation was made compulsory in the kutchā area. It is reported, however, that many house holders reverted to the use of insanitary pit latrines to avoid taxation. The existence of pit latrines in towns is always a menace to the health of the people in their vicinity and Municipal and Town Committees would do well to extend the conservancy service throughout their area.

Markets.—The majority of markets in towns are owned by Municipal and Town Committees. It is therefore up to them to keep their markets in a clean condition, forbid encroachments and prevent the stocking of useless and unnecessary things near the stalls. An unclean and filthy bazaar is always a good breeding ground for rodents and will consequently act as a centre for the dissemination of plague. The Royal Commission on Labour commented adversely on the lack of care over food supplies and the insanitary condition of markets. Government thereupon issued instructions for all markets to be inspected and recommendations given for their improvement. The efforts made by Municipal and Town Committees to improve the general and sanitary condition of the markets have been described in previous annual reports. The principal measures carried out during 1938 are described below :—

In *Tharrawaddy* grocery stalls are under construction in the new bazaar and a sum of Rs. 10,838 has been provided for the purpose. The corrugated iron roof of the Municipal bazaar, *Prome*, was replaced by Italit asbestos corrugated sheets at a cost of Rs. 6,150. In *Thatôn* a certain amount of congestion along E Road was removed by the construction of some pucca stalls facing the road and one pucca building on No. 4 Road. Some private stalls inside the bazaar were dismantled and in their stead sanitary buildings were made by the Municipality. The construction of a new market at *Mergui* on the site of the existing one is in progress. The evil of unauthorized street selling is reported to have assumed serious proportions and the Municipal Committee would do well to enlist the co-operation of the Police Department in stamping out the evil. In *Mandalay* several of minor municipal bazaars were improved during recent years—noticeably the Mingala Bazaar. Of the private markets under license, it is stated that the Nyunbaung Bazaar has at last achieved a satisfactory condition after the owners have carried out the necessary work of reconstruction. A certain amount of improvement has also been reported to have been carried out to the Lashio Bazaar.

Staff.—It is the policy of Government to insist on municipalities having a population of over 25,000 employing as their Health Officer a Medical Graduate with a Diploma in Public Health. For municipalities with a population of above 10,000 but below 25,000 it is

considered that a second class health officer would do. By a second class health officer is meant a medical officer of the sub-assistant surgeon cadre, who has undergone a special course for the Government License in Hygiene. During the year 7 out of 9 municipalities with a population of over 25,000, had a wholetime health officer, while 7 out of 19 municipalities with a population between 10,000 and 25,000 had such an appointment. Two municipalities with population below 10,000 have continued to employ each a second class health officer. Government made contributions towards the pay of the health officers in Pegu, Prome, Henzada, Thayetmyo and Nyaunglebin. Details of the health staff employed in municipalities will be found in Statement B at the end of this report.

Rural Sanitation.

General.—It is recognized on all hands that the standard of living of the villagers should be raised considerably if they are to become healthy and happy individuals in the body politic of the community. There is here a vast field of work for social and rural uplift workers. The Inter-Governmental Conference of Far Eastern Countries on Rural Hygiene has remarked that all possible efforts should be made to induce the villager to take an interest in the affairs of his village and this is best done, in the view of the Conference, by forming in each village or group of villages a body consisting of representatives of the village or villages, as the case may be, and that to such a body the following duties may be entrusted :—

- “ (1) The supply of water for domestic use ;
- (2) The cleansing of public roads, drains, tanks, wells and other public places or works in the village ;
- (3) The construction and maintenance and repair of minor roads, drains and bridges ;
- (4) Sanitation, conservancy and the prevention and abatement of nuisances ;
- (5) The lighting of the village and the improvement of the amenities of rural life and generally making conditions in the village more attractive.

In addition to the village committee, it is suggested that there should be an organization to supervise and control the work of the Village Committee, and to co-ordinate and supervise the work of the various agencies, Governmental and others, operating in the area ”.

From the public health point of view it is essential that attention should be concentrated on imparting useful knowledge to the villagers about personal and environmental cleanliness. The average villager knows nothing and cares less as to the way in which disease, epidemic or otherwise, spreads. He has been accustomed for years to attend to

the daily calls of nature in a particular area and to draw his water for domestic purposes from another area and does not see any reason why he should now change. Such an attitude unfortunately still exists in many small rural towns. It will take a long time before the sanitary consciousness of the people is aroused. The possible lines of development are the provision of trained personnel for teaching the villagers the ways in which they may better their conditions and the establishment of rural public health centres, in charge of medical assistants, capable of doing public health work as well.

The public health staff employed in the rural areas are shown in Statement B attached to this Report.

Water Supplies.—The sources of water supply in the rural areas are wells, tanks, springs and rivers. In the Delta well-to-do families store up rain water from the eaves in big Pegu jars for drinking purposes. Villagers living on the banks of rivers sometimes obtain their supply by digging holes in the sandy bed. All these sources are not above pollution. It is not enough if a few tanks or wells are newly constructed by local bodies or generous donors and left to their fate. What is essential is that some arrangement must be made to keep them from contamination. For tanks fences must be erected and a watchman or guard appointed to prevent human and animal contamination. For a well it is necessary to provide a platform, a parapet wall and drain and prohibit the bathing and washing of clothes nearby. Unless the above measures are taken these wells and tanks will in course of time degenerate into centres for the spread of water borne diseases such as dysentery, cholera and typhoid. Water supply is generally sufficient for the needs of the people in the Delta and in the wet regions in Upper Burma but in the Dry Zone the question of providing an adequate supply is undoubtedly a difficult engineering problem which will have to be tackled on national lines. The co-operation of the people should be enlisted not only in the sinking of new wells and tanks but also in their maintenance. They can contribute in the form of labour towards the cost of the schemes. Though the finances of Government are not yet in a position to make grants for big water supply schemes Government has, all the same, realised the need for improving the water supplies in the rural areas and has allotted Rs. 1,70,000 out of the rural uplift grant for the alleviation of the scarcity of water in the four Dry Zone districts of Myingyan, Magwe, Pakôkku and Lower Chindwin. Various schemes for the digging of new tanks and wells and repairing old ones are still being financed and the allotment is not yet exhausted. Grants are given on the understanding that the local bodies or the villagers who benefit by the scheme contribute one-third of its cost. A further sum of Rs. 15,000 has also been allotted for discretionary grants by Deputy Commissioners

for improvement of water supplies. The finances of the rural local bodies are still not in a position to make any liberal provision towards water supply schemes. The Bassein District Council purchased implements for boring tube wells in villages and constructed four in Kyônpyaw township. The Pyapôn District Council dug three new tanks and improved one existing tank at a cost of Rs. 3,450.

Conservancy.—In urban areas the removal of rubbish and excreta is done by the local body concerned and a tax is levied on the residents for such services. But in the villages it is not possible to have these waste products removed by hired agencies, as distances are great and the staff required would be above the capacity of an ordinary villager to pay. The District Councils and the Deputy Commissioners in charge of Local Funds employ a few sweepers and mehters to look after the cleanliness of big villages. In the rest of the areas, cattle droppings and rubbish are allowed to accumulate for months together and no general clean up of the village is made except during the presence of epidemics. The villagers generally resort to the nearest jungle or scrub for answering their calls of nature. This process is not in itself necessarily dangerous provided the people would take the trouble to evacuate into a shallow hole and cover it up with scrapings of earth ; but this will be rather too much to expect of the villager. Experience in Burma, as in other places, has shown that the installation of bored hole latrines provides in very many areas a satisfactory solution of this problem. Originating in experiments which were carried out at the Rural Health Unit, Hlègu, the practice of installing these latrines has been spreading throughout the country and up till now about 5,000 of these latrines have been installed. In the Hlègu Health Unit area where the population has become accustomed to these latrines and are slowly appreciating their æsthetic and sanitary value, the custom is growing up of demanding a small charge for the installation of bored hole latrines. This in most cases amounts to only a few annas. The idea is that if the owner has paid something, even as little as four annas, to have a latrine installed, he is more likely to look after it. During the year in Bassein district these latrines were installed in Kozu, Tagongyi, Begayet, Kangyidaung, Thabaung and Yegyi villages. In Insein district nine such latrines were constructed for demonstration purposes. In Myingyan district it is reported that experiments for the construction of bored hole latrines are carried out in Kyaukpadaung, Taungtha and Pagan townships and if the condition of soil is found satisfactory, it is hoped to instal a sufficient number.

Another method of disposing human excreta is what is known as composting, which has the additional value of getting rid of other refuse as well and providing in the end a lot of odourless humus which has a very high manurial value. This method of disposal is, however, new to this country and the agricultural population will have to be

enlightened on the immense aid their crops will derive by utilising this simple and effective process. An experiment on composting has recently been completed at Maymyo and the indications are that this line of attack is well worth pursuing. In many parts of Burma, more particularly in the Delta areas, composting is not as simple and easy a process as it is in less humid surroundings. It is often difficult to get an area of ground which is not continually water logged, and some protection from rain would be called for if the final results of the day to day working were to be successful.

The Deputy Commissioner, Katha, in commenting upon the work performed by village committees and headmen in connection with village sanitation remarks "Generally, the villages in the district are kept very clean and tidy and headmen and villagers are aware of this important part of their duties. It is in the rains when they are occupied with their fields and when cattle cannot be allowed to graze at will but are brought into the village to prevent them trespassing that the villages get dirty and rank vegetation is allowed to get a hold. But as soon as the villagers have time, a clean up is made. In the riverine areas, villages are under water for quite long periods and consequently villages are dirty. In the dry periods they are dusty for lack of shade. In such cases nothing can be done to improve sanitation." In summer, Sun, the Great Cleanser, enables the villagers to keep their surroundings tolerably clean but during the rains, scores of cattle and pigs kept under or near the houses, make the villages dirty and give rise to conditions ideal for the increase of the fly population.

Rural Health Unit, Hlegu.—This Unit which was started with the co-operation of the Rockefeller Foundation, in the year 1929 is intended to demonstrate what measure of success could be achieved in improving the general standard of health in a rural area with a reasonably adequate personnel and equipment. The staff consists of a Health Officer, a health visitor, four midwives, two public health inspectors, a clerk, a store-keeper, a vaccinator, a lorry driver, a peon and 13 coolies. As in the previous years the work undertaken included the collection and study of vital statistics, control of acute epidemic diseases, health education, school medical inspection, maternity and child welfare work, waste removal, improvement of food establishments and water supplies, etc.

The birth rate recorded during the year is 35·78, which is 1·44 less than that of the previous year but is 0·91 in excess of the five-year mean. A total of 2,411 birth registration certificates have been issued. The current year's death rate—22·88—shows an increase of 1·34 over that of the previous year and 2·62, when compared with the five-year mean. The infant mortality rate—162·59—is the second highest recorded since the inception of the Health Unit. Respiratory diseases,

accounted for many of these deaths. There were 69 still births giving a rate of 2·86 per 100 live births and 9 maternal deaths yielding a rate of 3·73 per 1,000 live births. The accuracy of the entries in the vital statistics registers was checked by the public health staff by house to house inspection. During the year 953 births and 158 deaths were verified by house to house inspections and 58 birth and 4 death omissions were detected and suitable action taken against the defaulters for infringement of the registration rules.

Of the major epidemic diseases, there were 3 cases of small-pox with 2 deaths and 1 non-fatal case of cholera, diagnosed clinically. There were in addition 17 cases of chicken-pox, 9 of measles and 11 of whooping cough. Immunisation with cholera vaccine was given to 728 persons ; the number of people vaccinated against small-pox was 6,970. Since the inception of the Unit, up to the end of 1938, 62,854 vaccinations have been performed and this number constitutes 93·28 per cent of the present estimated population.

Intensive health education is one of the weapons employed in dispelling ignorance and arousing the sanitary consciousness of the people. During the year 375 lantern talks, cinema shows, lectures to the public, health conferences and school talks were made with an approximate attendance of 33,395. These lectures were supplemented by the distribution of 10,907 health publications.

Inspections of school buildings were made on 129 occasions and the defects discovered were rectified as far as possible. The pupils in 23 schools are provided with individual drinking water cups, with pigeon-holed racks to keep them.

There were four midwives employed under a Subsidised Scheme, by which they were paid a small salary and allowed to retain the fees voluntarily paid by such of the patients as can afford them. These midwives conducted 436 confinements during the year, excluding 5 cases delivered under the care of the health visitor. Child welfare centres were conducted in Hlègu and Dabein. A total of 256 clinics was held at both the centres with a combined attendance of 2,623. The health visitor also made 3,560 home visits to infants, pre-school children and expectant mothers. Small dispensaries were maintained at both the clinics for the treatment of minor ailments where a total of 3,430 persons were treated. A Little Mothers' Club was inaugurated in the beginning of March with 23 girl-members of 10 to 18 years of age, in the Hlègu Child Welfare Clinic building. Lectures in hygiene were prepared by the Health Officer of the Unit and delivered by the health visitor to the members of the club.

The staff of the Unit made 1,267 inspections of latrines and discovered defects in 312 ; these were rectified on the spot. Eighty-nine bored hole latrines were constructed this year and the total number of bored hole latrines constructed since the inception of the Health

Unit was 2,327. Refuse disposal was carried out by means of a motor lorry at Hlègu and Dabein, wherefrom 1,159 lorry loads of refuse were removed to the dumping grounds.

Arrangements were made for the supply of water from a six-inch tube well at Hlègu by private contract since the middle of April 1938. Water is raised with a manual pump and distributed to the consumers in bullock carts at a small price. A tube well 67 feet deep was bored for the Yemun Vernacular School at the expense of the Unit as demonstration of a cheap, adequate and safe method of water supply for rural areas. Three schools have till now been supplied with sanitary wells, pumps, hydrants and bathing facilities. Inspections of wells and tanks numbered 612; and as a result of the inspections 19 tanks and wells were improved. Three new wells were also constructed according to sanitary standards.

There were 3,652 sanitary inspections performed in connection with tea and coffee shops, eating houses, meat stalls, fish stalls, vegetable stalls, stables, cattle sheds and pig styes. Visits to slaughterhouses were made on 57 occasions and on 11 of these defects were reported. Twenty-five new building plans were approved and 3 new buildings erected without approval were pulled down and subsequently re-erected in conformity with sanitary requirements.

Laboratory examinations were made of 155 specimens of urine from expectant mothers, of 14 blood smears for malaria and of five sputums for tuberculosis. Oil of chenopodium was administered to 1,497 persons for round worm infection and 96.74 per cent of the cases in which the results were known were relieved of the infection. Treatment clinics for lepers were held twice a week at Hlègu and once a week at Dabein and during the year 39 lepers were treated at both the clinics, of whom 24 were new admissions. As a result of the follow up work done by the Unit staff on 17 new cases, 188 persons were examined of whom 74 were discovered to be infected. A preliminary malaria survey was made in Mayabinseik village during the month of May and the spleen index was found to be 48 per cent.

The Unit serves also as a field training centre for public health personnel. This year four students of the License in Hygiene class and 24 students of the public health inspectors' training class had their training, the former for a fortnight and the latter for a month. Two public health inspectors in service had also a month's training before appearing for their efficiency bar examination and three new Sub-Assistant Surgeons of this department had their practical training at the Unit before being posted out to districts.

Mr. V. W. Fenn, L.S.M.F., C.P.H., Health Officer in charge of the Unit, proceeded on four months' leave from the 14th April and U Thet Pe, M.B.B.S., D.P.H., took over charge of his duties.

Rural Uplift Centre, Tatkon.—The trade depression of the period 1931—34 has affected the rural population in general and the agriculturists in particular to a very great extent. Thinkers all over the world have been trying their utmost to devise means for relieving the distress among these people. At the impetus of the Government of India a programme for rural uplift work was drawn up and a centre opened at Tatkôn in the year 1936. In this centre the various Departments of Government such as the Agricultural, Veterinary, Co-operative, Education, Medical and Public Health are concentrating their activities in order to show the villagers how best they can improve their conditions. As far as the Public Health Department is concerned the activities were of the same nature as those carried out at the Rural Health Unit, Hlègu. But at Tatkôn there are special public health problems such as malaria, leprosy and water scarcity and the measures taken to combat these will be described later.

The registration of vital statistics has, after the advent of the centre, improved steadily. The birth rate is 46·72, which shows a rise of 7·02 compared with the previous year and 11·44 over the five-year mean. A birth certificate of attractive design has been issued to every person reporting a birth. Most of the villagers seemed to be proud of the possession of the certificate which they either framed and displayed on their walls or kept in a secure place in their houses. The death rate of 32·65 shows likewise an increase of 3·98 compared with the previous year and 11·00 over the five-year mean. The health staff inspected the registration of births and deaths in the villages and in the course of the inspections detected 82 omissions of births and 26 of deaths. The vital index of the township was 143·09. There were 1,262 deaths of infants under one year giving an infant mortality rate of 299·97.

Sanitary measures such as the organisation of village clean-up drives, the construction of bored hole latrines and compost pits, vaccination campaigns, child welfare clinics, midwifery service, health lectures and demonstrations continued to be popular in the area. With a view to develop the sense of civic responsibility among the villagers a village cleaning competition was held at Tatkôn-Ywama Village in October 1938. Prizes were given according to the different types of houses which were grouped into three classes, timber houses, bamboo houses and huts. The response was good as the villagers kept their houses and compounds as clean and trim as possible. As a measure for improving the environmental sanitation 78 village clean-up drives were made by the mobile conservancy unit, comprising of four coolies and one maistry with a pair of bullocks and cart. The benefits of pitting manure and the installation of bored hole latrines in the villages were explained and 66 compost pits and 184 bored hole latrines were installed for demonstration purposes. The villagers were induced to contribute according to their individual means towards the

cost of constructing the bored holes. Cement squatting plates were supplied free but the superstructures were put up by the villagers themselves. The two vaccinators were advised to adhere to a tour programme covering every village and hamlet in the township and during the year they performed 6,355 vaccinations. The midwife attended 97 confinements and paid 412 ante-natal and 950 post-natal visits. In addition to the clinic at Tatkôn three times a week, a clinic once a week was started at Naungthinkha village, two miles from Tatkôn. During the year the health visitor attended 1,270 children and 150 expectant mothers at the two clinics and paid 3,498 home visits to infants and 821 visits to expectant mothers. A comparative study of the advantages and disadvantages of roofing materials made of corrugated iron, bamboo and of leaves and grass was made and the villagers were advised of the ways in which these materials could be used for roofing, without affording shelter to rats.

Turning now to the three major public health problems in the township it is seen that malaria is prevalent in the cold weather in the villages along the *Sinthè chaung* in the west and *Nawin chaung* in the east and both in the cold weather and in the rainy season in the villages closer to the foothills. A vast majority of deaths among infants in the malarious regions ought really to be attributed to malaria. Cinchona febrifuge tubes numbering 6,752 were distributed free in the area. Larvivorous fish were brought from the Yamèthin hatchery and introduced into five tanks and one *chaung* in five villages during the year. As an experimental measure 12 cinchona febrifuge plants were planted in 1937 in malarious regions and 22 in 1938 with the object of making available to the people in these areas, the bark of the trees, when grown up, for use during an attack of malaria. Only 12 plants survived at the end of the year.

So far 229 lepers were reported to have been verified in 35 villages, all of which could be conveniently grouped under three centres. During the year a leper colony was established at Nyaunglun by the Yamèthin Tuberculosis and Leprosy Relief Association. It is primarily meant for infectious cases from Yamèthin district. Through the generosity of a local donor a clinic was constructed at Nyaunglun and run on every market day with an average attendance of 35 lepers of which 18 were inmates of the colony. The leper clinic at the Civil Hospital, Yamèthin, continued to be popular and the average attendance was 36 lepers. A third clinic in the township will be opened at Tatkôn in the ensuing year.

It is reported that the water supply is sufficient throughout the year in the interior villages but is found short during the hot months in those villages which lie near the trunk road. The shortage of water is felt at Tatkôn for seven months in a year and a scheme for improving

the water supply was prepared by the Sanitary Engineering Department and submitted to Government for consideration.

The most outstanding event of the year was the holding of the vacation course on Rural Reconstruction at Tatkôn in October 1938 under the auspices of the Burma Rural Reconstruction League. No fewer than 500 students, including some monks, many men and women students from the various parts of Burma attended the course. So far as this Department is concerned the trainees were shown the practical field work done in connection with village improvement, such as the making of cement squatting plates, the construction of bored hole latrines, the working of a health centre and child welfare clinic and the organisation of a village health contest.

CHAPTER VI.

Maternity and Child Welfare.

General.—In this chapter are discussed the factors that tend to the preservation of the race. They include the health of the mother, the baby and the child. Unless the mother is healthy and able to withstand the strain of child birth the progeny is not likely to be robust. Again if a baby is handicapped at birth by disease and malnutrition, he is not likely to develop into a good citizen capable of surviving the struggle for existence. When the baby has outgrown into a child he still needs medical care and attention. Caries, tonsils and skin affections are some of the ailments to which he is likely to be subjected to. Medical examination at frequent intervals during his school course will ensure his steady progress into manhood.

Maternal Mortality Rate.—A practical way of judging the health condition of the mothers is to see how many of them die per 1,000 live-births. This standard is adopted throughout the world, so that the ratios thus worked out are comparable from one area to another and from one country to another country. In Burma during 1938 the maternal mortality rate was 6·02, the rates for rural and urban areas being 5·33 and 11·27 respectively. Registering agencies in this country are required to classify all deaths of mothers within 14 days of delivery as being due to the effects of child birth. It is doubtful if those in the rural areas have followed this requirement, as the rural rate is very inaccurate. The figure for urban areas may, however, be taken as approximately correct. The rate for England and Wales in 1935 was 3·94. As the midwifery service in both towns and villages is still meagre, the time is not yet ripe to go beyond, investigating into the causes for this high maternal mortality.

Still-Birth Rate.—The number of still-births recorded this year is 4,636. Of these, 1,727 occurred in the rural areas and 2,909 in

towns. The percentage of still-births to live-births is 1·11, which is 0·04 higher than the previous year. Statistics of still-births by classes are published in Statement 1 (a) in Volume II of this Report. As in the case of maternal mortality, these statistics savour of unreality through gross incompleteness in registration.

Infant Mortality Rate.—The death rate among infants under one year is often said to be the sensitive index reflecting the progress made by a community in social welfare. The rate for the whole of Burma is 222·57. Among the reasons usually attributed for this high rate are exposure to insanitary surroundings, poverty prevailing among the lower classes, births of weakly infants to mothers whose condition is debilitated by a rapid succession of pregnancies, irregular breast feeding producing digestive disorders among infants, ignorance of mothers in matters connected with parturition and the rearing of babies and last of all want of skilled assistance during confinement. The causes are multiple and extremely complex and include social and economic factors.

The rate for rural areas is 214·31, which is 18·79 in excess of the previous year. High rates have been recorded in Kyauksè 309·61, Shwebo 293·89, Tharrawaddy 281·27, Toungoo 278·19 and Yamèthin 272·15. The accuracy of the rate recorded in Toungoo district is open to doubt, as birth registration is still not up to the mark. In all the other districts malaria seems to be an important factor in weakening the constitution of the mothers.

The rate for towns is 285·92. This figure represents an increase of 24·96 over the previous year and 23·05 compared with the five-year mean. The towns (excluding cantonments) recording the highest rates are Taungdwingyi 478·47, Pakôkku 450·28, Thamaing 448·53, Shwe-daung 428·57, Myingyan 404·98, Yandoon 402·64 and Pyawbwe 400·90. There was a drop of 36·75 in Taungdwingyi compared with 1937, but the rate is still very high. As in other towns, infantile convulsions and respiratory diseases were the main reported causes ; congenital venereal disease seems to have also played an important part in causing mortality. The work of the health visitor has shown appreciable results but much still remains to be done. The Infant Welfare Society, Pakôkku, does not seem to have received as much support from the local residents as one should expect considering the high infant mortality rate recorded in this town. The epidemic of plague and the riots seem to have been responsible for the waning of the enthusiasm. One of the two centres run by the Society had to be closed down. In Thamaing the rate has shown a jump of 139·81 over the previous year. The recording of births in this town does not appear to be thorough and hence no reliance can be placed on the infant mortality rate which is calculated on the recorded number of births. The entertainment of a midwife in this town in 1938 will make available to the poorer mothers in the locality

skilled assistance at the time of labour. It is likely that in Shwedaung the epidemic of malaria was responsible for the large number of infant deaths this year. There is no infant welfare society at Myingyan and the entertainment by the Municipal Committee of a single midwife for the town which has an average of 1,050 births in a year is far from adequate. The Health Officer, Pyawbwe, remarks that the present highly insanitary state of the town is the cause of the high infantile mortality as well as frequent epidemics of plague.

Maternity Work.—The provision of an adequate midwifery service is a concern of the local bodies, such as Municipalities, District Councils and Deputy Commissioners' Local Funds. Some of the municipalities, however, have arranged with the infant welfare societies in their towns to contribute towards the pay of the midwives and leave it to the societies to employ them and supervise their work. In many cases the contributions are small and do not even cover the pay of the midwives. In this way 36 midwives were employed by 11 societies and they attended 5,529 confinements. The number of midwives employed by local bodies was 248 and the confinements attended by them totalled 26,050. In the Rural Health Unit, Hlègu and in the Rural Uplift Centre, Tatkôn, 5 midwives were employed and they attended 533 deliveries. The percentage of births attended by midwives in urban areas is 35·40, and in rural areas 3·42. While it is possible for municipalities and town committees to increase the number of midwives in their employ so as to make midwifery assistance available to as large a percentage of mothers, as possible in their areas, the rural local bodies cannot go ahead increasing their midwifery staff at the same pace. It is only in villages with a very large number of houses that a midwife will find enough work to keep her engaged and in the case of widely scattered hamlets with poor means of communication, most of her time will be spent in travelling to and fro. The increase in the number of midwives appointed in villages is therefore bound to be slow.

Statistics as to the skilled assistance utilized by mothers during delivery time are available in 15 towns. From these it is observed that of the total births in these towns 22·51 per cent were attended by Municipal and Infant Welfare Societies' midwives, 7·62 per cent by private midwives, 2·47 per cent by private practitioners, 20·06 per cent in hospitals and the balance 47·34 per cent by untrained midwives.

Child Welfare Work.—Voluntary societies do most of the child welfare work in Burma, the only exceptions being the Rural Health Unit, Hlègu, the Rural Uplift Centre, Tatkôn, and the Corporation of Rangoon. There were 47 such societies in the country. Of these 32 societies conducted 36 centres, 21 employing health visitors and 11 a midwife or nurse to do the same work.

The Burma Health School which trains candidates for child welfare work was reopened on the 1st August. Eight candidates were admitted as stipendiary and three as non-stipendiary students to the course and all of them passed the final examination. As in the previous year the *Rai Bahadur R. K. Ghose Child Welfare Centre* was used as a training centre for practical instruction to the students of the Health Visitor Class. New appointments of health visitor were made during the year by the child welfare societies at Henzada, Chauk, Meiktila, Bhamo and Shwebo.

All voluntary societies depend upon grants from Government, the Red Cross Society and Municipal and Town Committees and to a certain extent on local subscriptions and donations for their maintenance. A sum of Rs. 20,000 was spent by Government in grants to 28 societies, the amount given in each case varying from Rs. 100 to Rs. 4,000 and the Burma Red Cross Society allotted Rs. 6,450 to 26 societies.

The following is a brief summary of the activities of the various child welfare societies in Burma that employed health visitors :—

RANGOON TOWN.—The National Council of Women in Burma is running a centre at Bow Lane and the Burma Red Cross Society the *Rai Bahadur R. K. Ghose Child Welfare Centre* at Kemmendine. The attendances at these two centres were 4,511 and 5,323 respectively and the visits made by the two health visitors 3,851 and 3,161 respectively. The Corporation of Rangoon is running four Child Welfare Centres with eight health visitors. The Maternity and Infant Welfare Society, Rangoon, is maintaining four maternity centres and has nine midwives in its employ. A total of 7,304 ante-natal cases is reported to have attended the four centres.

MANDALAY.—The Maternity and Infant Welfare Society maintains two centres and employs a staff of eight midwives, one lady superintendent and two health visitors. The midwives attended 1,075 confinements during the year. The attendances at the old centre numbered 7,420 and the visits to nursing and expectant mothers 4,527. In the new centre a total of 3,747 visits were recorded and the health visitor in that area paid 4,777 visits to homes.

MAYMYO.—The Society for the Promotion of Public Health, Maymyo, was the first to organize child welfare work on sound lines. The health visitor looked after both the centres maintained by the Society and paid 3,996 home visits. The attendances at the centres totalled 5,012.

BASSEIN.—The Infant Welfare Society in this place employs one health visitor and four permanent midwives. A temporary midwife was employed for some months in the year. The health visitor made 4,867 home visits; the attendances at the centre numbered 5,419. The midwives of the society attended 735 confinements. The society

contemplates entertaining an additional health visitor and opening a second centre.

MOULMEIN.—The Society for the Prevention of Infantile Mortality, Moulmein, has continued to employ a health visitor and four midwives. The attendances at its two centres were 2,988. The health visitor paid 3,278 visits to the homes. The four midwives attended 798 confinements.

HSIPAW.—The health visitor in the employ of the Maternity Home Society, Hsipaw, made 4,375 visits to homes and the attendances at the centre were 1,930.

TAUNGGYI.—The attendances at the health centre run by the Infant Welfare Society, Taunggyi, were 1,259; the home visits made by the health visitor 4,410.

MÔNYWA.—The Child Welfare Society recorded 2,549 centre attendances and 5,406 home visits.

CHAUK.—The newly formed Child Welfare Society in this place employed a health visitor in November and opened a centre towards the close of the year.

TOUNGGOO.—The attendances at the clinics totalled 1,644 and home visits 3,284.

TAUNGDWINGYI.—The health visitor in this town paid 3,594 visits to homes and the attendances at the centre numbered 2,010.

PROME.—The health visitor employed by the Infant Welfare Society paid 4,731 home visits and the attendance at the centre totalled 3,102. The slight decrease in the figures when compared with the previous year may be due to the absence on leave of the health visitor.

HENZADA.—The Infant Welfare Society in this town has employed a health visitor from February and during the year she paid 1,752 home visits. The attendances at the centre, which was opened in April, were 2,061.

THATÔN.—The society here has rented a more commodious building for its centre. There was an improvement both in the centre attendances and in the visits made by the health visitor. The former totalled 2,897 and the latter 2,629.

MEIKTILA.—Thanks to the generosity of two local donors, the Infant Welfare Society, Meiktila, will be having a building of its own in the very near future. A health visitor was employed during the year and she made 3,706 visits to expectant and nursing mothers. The centre attendances totalled 1,547.

YAMETHIN.—There was improvement both in the centre attendances and in the home visits paid by the health visitor of the Child Welfare Society, this year's figures being 2,371 and 4,237 respectively.

PYINMANA.—In this place the attendances at the clinic numbered 3,239 and home visits 5,190.

BHAMO.—The Infant Welfare Society employed a health visitor this year and she made 1,141 visits to homes. The attendances at the centre numbered 840.

SHWEBO.—The local society managed to employ a health visitor during the year and she made 2,674 visits to homes. The attendances at the centre reached a total of 1,529.

YENANGYAUNG.—The monthly average attendance at the centre run by the Infant Welfare Society was 213 and the average number of visits paid by the health visitor increased from 350 to 450 in September after the engagement of an assistant to do health visiting. The society contemplates opening a second centre in the town.

The child welfare work done in the Rural Health Unit, Hlègu and in the Rural Uplift Centre, Tatkôn, are described in another part of this report.

The societies at Akyab, Tharrawaddy, Syriam, Pegu, Pyapôn, Minbu, Thayetmyo, Magwe, Pakôkku, Kyaukse and Sagaing employed a midwife or nurse to conduct their child welfare centres. A certain amount of child welfare work is reported to have been done by the societies at Dedaye, Maubin, Thazi, Katha, Myinmu and Kyaiklat. The societies at Sandoway, Mergui and Kawkareik are said to have become defunct. No annual report was received from five societies.

Medical Inspection of School Children.—It is six years since Government subsidy for the medical examination of school children has been stopped. Previously medical inspection was compulsory in all Anglo-Vernacular, English and Normal Schools. The number of school inspection reports received for 1931, the last year in which Government grants were made for the purpose, was 176. Since then a small number of school authorities have arranged for the continuance of the medical inspection, either by levying a fee on the pupils or by meeting the charge on this account from their school funds. The number of reports received this year is 36, of which 35 only give complete details. Of these, 10 were from day schools and 25 from boarding schools. Eight of the 25 boarding schools were English and the rest Anglo-Vernacular Schools.

The number of pupils on the rolls was 10,921, of whom 10,372 or 94·97 per cent were examined by medical officers. Of the school children examined 33·96 per cent were protected by primary vaccination, 63·91 per cent by revaccination, while 1·49 per cent had an attack of smallpox. The unprotected constituted 0·64 per cent.

The most common defects noticed at the medical inspections were defective teeth 24·89 per cent, enlarged tonsils 16·65 per cent, defective

vision 7·98 per cent, anæmia 6·08 per cent, and skin disease 4·07 per cent.

Considering the fact that medical inspection is being carried out through the exertion of the school authorities, signs of co-operation are noticeable on the part of the Superintendents and school staff in bringing to the notice of the parents and guardians the defects discovered at medical inspection and in carrying out the recommendations of the Medical Officers as far as possible. The Principal, Methodist Burmese Girls' Anglo-Vernacular High School, Rangoon, took special interest in the health of the school children. In most of the cases it is understood the Principal herself took the children to the hospital for proper treatment with the consent or in company with the parents. The Headmaster, Judson Boys' High School, Moulmein, points out that the closeness of the hospital of which the School Medical Officer is the head has made for efficient handling of many cases. The Superintendent, American Baptist Mission School, Pegu, remarks that the school staff carried out the Medical Officer's instructions as far as possible and reported what they could not do to the parents. The following remarks of the Inspector of Schools, Rangoon Circle I, are brought to the notice of all school authorities : " When I was a Headmaster, I had a printed slip, informing the parent of the child's defects. It was stated thereon that I would make all arrangements for treatment if the parent intimated his willingness. He signed the form to this effect and the necessary treatment was given in school or arranged for in hospital." The entertainment of a nurse in some of the American Baptist Mission Schools has made possible a certain amount of follow up work to be done in these places.

Opinions vary as to the response of the parents in carrying out the recommendations of the school medical officers. The Principal, St. Mary's English School, Mandalay, says : " The parents co-operate splendidly with us and have any defects that we point to them attended to ." The Medical Officer, Cushing High School, Rangoon, writes : " Four hundred and twenty-eight notices were issued to the parents. Almost all the parents acknowledged the receipt of the Medical Reports. In acknowledging the reports, the parents thanked the Principal for the interest he has taken in the health of their children and also intimated that they have placed their children under treatment ." The Superintendent, Kingswood School, Kalaw, remarks : " All notices have been sent to parents and replies are coming with promise of care in all cases ." The Medical Officer, Reddiar Anglo-Vernacular Girls' School Rangoon points out : " There is a general improvement in the health of the children as a whole. Enlarged tonsils and adenoids are getting less and less conspicuous. Parents seem to take better notice of advice given and the result is favourable ." On the other hand the Medical Officer, St. Gabriel's S.P.G. High School, Rangoon, remarks : " Still not much response to the Medical Officer's warning notices. It would be

advisable to add a slip of acknowledgment of the notices from the parents as in many cases the boys do not show or inform their parents about their defects." The Head Master, Government High School, Moulmein, points out that reports after diagnosis were sent to all parents concerned but that the response is still poor. Only 10 out of 43 registered for defective vision bought spectacles. The Headmaster, Government High School, Tavoy, remarks that the parents are still indifferent as to the care of minor ailments like trachoma and tonsils. Apart from the individual remarks quoted above, the impression one forms on going through the reports is that response of the parents was generally satisfactory.

The services of the Medical Officers were of great help in guarding the health of the pupils during outbreaks of epidemics. In the Morton Lane Girls' High and Normal Schools, Moulmein, there were about 20 cases of dysentery in June and July and the school nurse took care of the boarders in the sick rooms under the direction of the school physician. A small outbreak of measles, with 8 cases, occurred in the Shan Chiefs School, Taunggyi. The pupils were isolated by the Medical Officer in the Civil Hospital and latterly in the school sick room. Four cases of mumps were segregated by the Medical Officer, St. Joseph's Convent High School, Toungoo. Protective inoculation against plague and enteric was given by the Medical Officer, St. Mary's English School, Mandalay and against cholera by the Medical Officer, St. Joseph's Convent High School, Toungoo.

The Medical Officer, American Baptist Mission Girls' High School, Kemmendine, points out that there are a number of children with round shoulders. It is said that the desks in some of the class rooms are poor and undoubtedly account for this condition. In the Reddiar Anglo-Vernacular Girls' School, Rangoon, the Medical Officer states that the children in the Infant class need Kindergarten tables and chairs very badly. It is pointed out that the children sit hunched up holding their slates on their thighs, which position gives them a stoop which would become difficult to correct when they grow older.

The sanitary condition of the school premises which were inspected are reported to be satisfactory.

District Health Officers, Assistant District Health Officers and Sub-Assistant Surgeons of this Department continued to carry out inspection work of vernacular schools during the course of their tour in rural areas.

The proposal for reviving the school medical inspection first in some of the larger towns outside Rangoon, such as Mandalay, Moulmein and Bassein, referred to in the last year's memorandum was not favourably received by the Municipalities concerned and a more elaborate scheme so as to embrace all English, Anglo-Vernacular and Vernacular Schools in the country is now being considered.

CHAPTER VII.

Public Health Propaganda.

Hygiene Publicity.—Health propaganda is one of the effective weapons wielded by the officers and staff of this Department in dispelling ignorance and in imparting knowledge to the people about the correct way of living. From the beginning of his school career every child is taught some elementary principles about hygiene which is made a compulsory subject up to Standard VII. For adults lectures, magic lantern demonstrations and cinema shows are given by the health staff in both urban and rural areas.

In rural areas the public health staff gave 349 (257) health talks, 12,128 (12,806) lectures, 426 (303) magic lantern shows and 23 (26) cinema demonstrations to audiences estimated at 710,309 (761,578). They also distributed 255,309 (252,356) copies of health publications on various subjects. The urban health staff gave 264 (856) health talks, 981 (1,172) lectures and 235 (199) lantern demonstrations to audiences estimated at 132,817 (127,321). They distributed 152,849 (180,082) health publications. The Hygiene Publicity Officer carried out health propaganda work in 14 (16) towns and 23 (37) villages. The towns included such important centres as Shwebo, Akyab, Bassein, Maubin and Meiktila, etc. The villages included Natsingon at the request of Dr. J. R. Andrus of Judson College ; Nyaungbintha and Tatkon at the request of U Ba Lwin, K.I.H., Chairman, Burma Rural Reconstruction League ; and Ye-U at the request of the President, Rural Reconstruction Association, Ye-U. U Thaw Zan conducted with the help of the portable health exhibits loaned by the Burma Red Cross Society, small health exhibitions at 9 towns and villages. These shows all proved very successful and instructive. In all, U Thaw Zan gave 37 (51) lectures, 76 (94) lantern lectures, 75 (96) cinema demonstrations to audiences estimated at 126,433 (140,089) and distributed 62,400 (52,470) copies of publications. Health education continues to maintain the high standard reached in previous years. For the first time in the history of this Department seven health lectures, two health pamphlets and two health songs were broadcast from the Rangoon Radio Station. A total of 522,579 (636,370) copies of health publications were issued by the Hygiene Publicity Bureau. One new pamphlet (Do you get a Square Meal) was produced both in English and Burmese, 8 pamphlets were revised and 19 reprinted. Another standard size (35 m.m.) film "Let Us Open Our Eyes" dealing with venereal diseases—a present by the Burma Red Cross Society—was added to the library of films of the Bureau. Two films showing the Môngywa Leper Colony and the Tatkon Rural Reconstruction School were made departmentally. Five 16 m.m. films were also purchased and added to the library. They deal with

Body Framework, Bacteria, Breathing, Care of the Teeth, and Food and Growth.

Rangoon Health Week.—The Burma Red Cross Society has been conducting annually a health week and exhibition at the Jubilee Hall, Rangoon. These serve as splendid propaganda for infusing into the minds of the people knowledge on such important subjects as housing, water-supply, personal and environmental cleanliness, causes and prevention of disease, etc. This year the exhibition was opened on the 14th December by His Excellency Sir Archibald Cochrane, K.C.M.G., K.C.S.I., D.S.O., Governor of Burma. The organisers spared no pains in introducing innovations and making the exhibits and models as interesting and instructive as possible.

The ground floor of the hall was utilized for the purpose of displaying exhibits of an entirely technical nature. The accommodation available was divided into sections each dealing with the various aspects of a particular disease or group of diseases. The plague and malaria sections continued to draw a large attendance. Two other sections, one on water and the other on food were so arranged as to focus attention on the danger of drinking polluted water and the importance of a well-balanced diet and the manner of planning such a diet by actual cooked meals. Models, posters, charts, and other exhibits relating to typhus, dysentery, cholera, dengue, smallpox, leprosy and tuberculosis were exhibited. The display of models of the silhouette type was a new feature in this year's exhibition. As in previous years, the Director and staff of the Harcourt Butler Institute of Public Health looked after the designing and arrangement of the technical exhibits.

The space in the compound outside the hall was utilized for the erection of temporary sheds, each to demonstrate some aspect of public health work. In the lawn on the eastern side a model cowshed with a well cared for cow and calf and a milking shed were erected and milking was done every evening to show the hygienic methods to be employed in the handling and delivery of milk. A special stall was placed at the disposal of the Rural Reconstruction League. The exhibits in this stall consisted of enlarged photographs showing what the League has been doing during the past three years at demonstration centres, camps and training schools. Diet charts and figures showing the total number of deaths caused by unbalanced diet through poverty, ignorance or neglect among the people were demonstrated. The stall also achieved one of the objects of the League in participating in the exhibition, *viz.*, to enhance the interest of the urban population in rural uplift work. Models and posters dealing with the public health aspect of rural reconstruction were made by the Health Officer, Rural Uplift Centre, Tatkon and displayed in a separate stall. The first set of exhibits depicted a wellkept village-house and compound in contrast with an illkept one. The former was well ventilated and provided with

all the essentials of a village home such as properly built granary, cow-shed, manure pit, well to which the time honoured Burmese *moundat* was attached, vegetable beds, chicken roost, pestle and mortar device for pounding rice, handloom, bored-hole latrine and firewood rack. In the adjoining section a similar house and compound were reproduced in an ill assorted and insanitary manner. At one end of the stall was on view two young plants, one prospering in the presence of sunlight and air and the other withering in their absence. The prevailing village conditions as they are were shown in contrast with those as they ought to be. In the stall taken up by the Hlegu Health Unit, the activities of the unit were depicted in the form of charts and models showing the advance made in the promotion of health in this township. A new feature this year was the display of models on the subject "Fitness Wins." They showed the need and value of exercise and displayed in compact form a series of 5 minutes physical jerks without apparatus or appliance of any kind. In the south-east corner of the compound various kinds of models served to show the spread and prevention of dengue and filariasis in Rangoon, of malaria in the villages of Burma and of plague both in the towns and villages in this country. In the section dealing with dengue and filariasis the breeding places of numerous kinds of domestic mosquitoes were shown as also the methods to be employed for their control. In the next section a malarious village with breeding grounds for anophelines were contrasted with one where preventive measures were adopted. In the plague stall, the alterations necessary for a household paddy godown to be made rat proof were shown. Separate stalls were assigned for dealing with tuberculosis and leprosy. The whole of the southern lawn was reserved for the Women and Children's Section. Everything pertaining to the mothers' and babies' health was shown. The National Council of Women in Burma conducted a Child Welfare Centre on the same lines as their Baby Welcome at Bow Lane. During the week 573 children were brought for advice and treatment. A small creche was also conducted by the Council. Next came two Burmese maternity homes, one styled "As it is" with dark and ill ventilated rooms with a *wunswe* in attendance and the other styled "As it ought to be" with a cheap yet clean house and a qualified nurse in attendance. Pamphlets illustrating the principles of dietetics and showing the actual diets for toddlers up to the age of five were freely distributed. There were also special stalls for the display of posters and models on safety first and dental care. The Police Department depicted crime and its sequelæ, the loss of life and limb through wanton disregard of road sense and the loss by fire through carelessness in the form of models and posters in another side of the compound.

In order to interest school children throughout the country on public health questions and to encourage them to study the subjects

connected therewith, the Health Week Committee conducts annually essay and poster competitions just before the health exhibition. The subject chosen for the essay competition this year was leprosy. For the senior school girls a special essay competition on child welfare was also conducted. Altogether 1,476 school children participated in the essay and poster competitions. Thirty-two book prizes of the value of Rs. 10 each were awarded to the boys and girls for the best essays together with cups and fountain pens to those who stood first in the list. Twelve book prizes were offered for the best posters and a wrist watch with a book prize for the best essay on child welfare. All these prizes were distributed to the winners by Her Excellency Lady Cochrane on the opening day of the exhibition.

During the week the Hygiene Publicity Officer gave magic lantern talks on health subjects to school children. Arrangements were also made for the delivery of lectures at various schools, clubs and associations. Each evening there was the enactment of dramas on public health subjects by school children; cinema films emphasizing the preventive aspect of medicine were screened and pamphlets and cards on health subjects in English and Burmese were distributed to the visitors. Lectures on nutrition, tuberculosis, rural reconstruction, leprosy and malaria were broadcasted from the Government Experimental Broadcast Station, Rangoon.

The Red Cross Society was enabled to carry out the Health Week so successfully by a generous contribution from the Corporation of Rangoon.

CHAPTER VIII.

Personnel employed on Public Health Work in Burma. (District Staff)

District Health Officers.—Wholetime District Health Officers were continued to be employed at Akyab, Myaungmya, Pyapôn and Insein districts. Consequent on the appointment of U Maung Gale, B.A., M.B., D.P.H., as Nutrition Survey Officer, Burma U Lat, M.B., B.S., D.P.H., was appointed to officiate as District Health Officer Myaungmya, from the 26th October. A temporary post of wholetime District Health Officer for Hanthawaddy district was created by Government for a period of two years and Mr. M. Chit Tway, M.B., B.S., D.P.H., was appointed to the post from the 1st October 1938.

Assistant District Health Officers.—The sanctioned strength of this Cadre is five. U Lat, M.B., B.S., D.P.H., continued as Health Officer, Maymyo Municipality, till the 17th October and was then posted to officiate as District Health Officer, Myaungmya. Mr. Ah Shoung, M.M.F., D.P.H., was employed in Mandalay district

the whole year, except for a spell of three weeks, when he was sent to Toungoo district. Mr. M. Chit Tway, M.B., B.S., D.P.H., remained as Assistant District Health Officer in Hanthawaddy district and from the 1st October he was promoted as District Health Officer in the same place. U Maung U, M.B., B.S., D.P.H., was Assistant District Health Officer, Bassein district, till his transfer as Assistant Port Health Officer, Rangoon, in August. U Thet Pe, M.B., B.S., D.P.H., worked in Prome and Insein districts up to October, when he was sent to Maymyo to relieve U Lat. On return from Calcutta, U Ba Nyun, B.Sc., M.M.F., was posted to Meiktila district. U Than Aung, M.B., B.S., was employed in Shwebo district for $5\frac{1}{2}$ months and in the Hlegu Health Unit for nearly 2 months and in Amherst district for $2\frac{1}{2}$ months. From the 18th November he was posted on special duty with Professor S. Lyle Cummins.

Sub-Assistant Surgeons.—The number of sub-assistant surgeons sanctioned for this Department stood at 36 during the year. They constituted the principal mobile staff which the Director of Public Health, Burma, can concentrate on any area threatened or infected with an outbreak of epidemic disease. They perform the bulk of preventive inoculation in the rural areas. When there is no epidemic calling for concentrated effort, they conduct health propaganda check vital statistics and vaccination work, inspect vernacular schools and give advice for improving the environmental sanitation of the areas visited by them. In fact they carry out the functions of an inspecting health officer in the villages. During the year these sub-assistant surgeons performed 134,856 plague and cholera inoculations, checked 128,571 birth and death entries and verified 65,059 vaccinations.

Public Health Inspectors.—The number of public health inspectors employed in the rural areas was 76. This number should be considered as quite inadequate, as the Public Health Department Reorganization Committee has visualized the appointment of a public health inspector for each circle in a district. Twenty-one inspectors of vaccination and 307 vaccinators were also employed in the rural areas. The Public Health Inspectors' Training Class was suspended during the year 1938-39.

Urban Staff.

Eight towns employed 14 first class health officers and 8 towns employed 8 second class health officers. In addition, 125 public health inspectors and 97 vaccinators were employed in urban areas.

Expenditure on Public Health Services.

The total amount spent during the year by local authorities on public health services was Rs. 73,55,107, of which Rs. 65,20,562

were spent in towns and Rs. 8,34,545 in rural areas. The percentage of income expended by all local bodies on these services was 13·57 per cent, the figure for towns being 15·89 per cent and for districts 6·35 per cent. Of the total income from all sources 4·04 per cent was spent on construction and maintenance of water works, 0·61 per cent on drainage and 4·83 per cent on conservancy. The details of expenditure are given in Statement A attached to this report.

Nutrition Surveys.—The Health Organization of the League of Nations has for some years past been devoting its time to problems concerning nutrition. In 1934 it arranged for a general report on the subject to be prepared by Dr. Burnet and Dr. Aykroyd which was published in the Quarterly Bulletin of the Health Organization in June 1935. Another report on the physiological bases of nutrition was prepared by a Technical Committee and published in September 1936. The Report of the Royal Commission on Agriculture, which visited Burma also, directed attention to the importance of this subject and a Nutrition Advisory Committee of the Indian Research Fund Association was formed in June 1936. This Committee recommended that a specially selected worker from each province should be sent for a period of training at Coonoor and that the services of such an officer would be useful for public health nutrition work in general. Following on this recommendation the Government of Burma selected U Maung Gale, B.A., M.B., D.P.H., then District Health Officer, Myaungmya, to attend the course at the Nutrition Research Laboratories, Coonoor. After his return, U Maung Gale was appointed as special Nutrition Survey Officer for Burma, which post he assumed on the 4th October. It is considered that the surveys he will carry out will probably extend over a period of five years; even so it may not be possible for one officer to cover the whole country within that time. Arrangements will therefore be made for him to be assisted in this work by relays of sub-assistant surgeons from the cadre of the Public Health Department. The idea is that these sub-assistant surgeons will be able to start survey work in other areas and thus it may be possible to cover all the districts fairly quickly. In view of the unaccustomed questions and investigations that are implied in a survey work of this nature, it was decided to start the survey in Insein district where U Maung Gale will have the assistance of the Rural Health Unit, Hlegu. It will be necessary for this officer to find out in each area what kind of food is eaten by each social class of people, the quantity consumed and its cost. As the survey progresses analyses of the various foods will be carried out at the Harcourt Butler Institute of Public Health, Rangoon. Along with the surveys he will conduct propaganda on the value of a balanced and adequate diet. Inspection of children and adults will be necessary to assess the state of health of the people

from the diets at present in common use. It will be seen from the foregoing, that the field of activity to be covered by this work is a vast one. It is expected that the Nutrition Survey Officer may also be able to prepare articles, pamphlets and other literature concerning diet and articles of food.

Headquarters Staff.

The activities of the Harcourt Butler Institute of Public Health are the subject of a separate report and those of the Port Health Department are published as Appendix D to this report.

Major C. A. Bozman, I.M.S., held charge of the Department during the year and U San Hla Aung, M.B., Ch.B., D.P.H., and Mr. K. T. Jungalwalla, L.M. & S., D.P.H., held charge of the post of two Assistant Directors.

U Maung Gale, B.A., M.B., D.P.H., Nutrition Survey Officer, Burma, was deputed to attend the Tenth Congress of the Far Eastern Association of Tropical Medicine and Hygiene held at Hanoi from the 26th November to 2nd December 1938.

T. J. DAVIDSON, *Major, I.M.S.,*
Offg. Director of Public Health, Burma.

RANGOON : 12th July 1939.

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APPENDIX A.

VACCINATION.

(THIS REPORT REFERS TO THE OFFICIAL YEAR 1938-39).

(The figures in brackets are the corresponding figures for 1937-38).

Establishment.—The following table shows the strength of the vaccination staff employed in Burma and the Federated Shan States during the year 1938-39 as compared with that of the two preceding years :—

VACCINATION STAFF.

Year.	Burma or State.	Part-time Super- vising Officers.		Wholetime Staff.		
		Civil Sub- Assistant Surgeons.	Public Health Inspectors	Inspectors of Vacci- nation.	Head Vaccina- tors.	Vaccina- tors.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1936-37 ...	{ Burma ... Shan States	25 ...	97 2	21 ...	... 3	352 42
1937-38 ...	{ Burma ... Shan States	14 ...	117 2	19 ...	... 3	355 42
1938 39 ...	{ Burma ... Shan States	8 ...	146 5	18 ...	... 3	355 45

Burma.—During the year 1938-39, the same number of vaccinators was employed as in the previous year. Supervision was exercised by 18 (19) inspectors of vaccination, 146 (117) public health inspectors and 8 (14) civil sub-assistant surgeons in receipt of vaccination allowance. In addition, district and municipal superintendents of vaccination, assistant district health officers and sub-assistant surgeons of the Public Health Department also supervised and verified vaccinations.

Only 8 (17) temporary vaccinators were employed during the year—all in Pakôkku district.

Federated Shan States.—Three extra vaccinators were employed in the Federated Shan States.

VACCINATIONS PERFORMED.

Burma.—A total of 1,311,742 (1,626,033) persons was vaccinated during the year. Of these 949,320 (1,159,836) were vaccinated by regular vaccinators in rural areas, 198,280 (286,052) by regular vaccinators in urban areas, 1,947 (1,645) by military authorities in cantonment areas, 1,143 (3,018) by railway dispensary staff, 2,572 (2,853) by Government dispensary staff, 1,278 (2,212) by private medical practitioners, 45,383 (37,101) in jails and 111,819 (133,316) in ports.

Rural Vaccination.—Of the 949,797 (1,160,481) operations performed in rural areas by regular vaccinators, 505,742 (549,308) were primary and 444,055 (611,173) revaccinations.

Of the primary operations 475,304 (499,004) were successful, while the results of 27,031 (44,809) were left unverified. The percentage of success in verified cases was 99·29 (98·91) per cent. From the rural districts of Pegu, Tharrawaddy, Myaungmya, Pyapôn, Kyauksè and Bhamo 100 per cent success rates are reported. Success rates over 99 per cent are reported from the rural districts of Maubin 99·99, Tavoy 99·97, Mergui 99·97, Toungoo 99·93, Magwe 99·92, Arakan Hill Tracts 99·90, Henzada 99·87, Lower Chindwin 99·87, Akyab 99·80, Meiktila 99·86, Thatôn 99·73, Katha 99·64, Sagaing 99·61, Pakôkku 99·49, Hanthawaddy 99·46, Sandoway 99·25 and Bassein 99·02. None of the rural districts reported a rate less than 90 per cent. Of the total of 475,304 (499,004) primary successful operations, 151,241 (151,769) were on infants under one year of age, 255,976 (270,893) on children of one to six years and 68,087 (76,342) over six years. It is desirable that as many children as possible should be vaccinated in their first year and in no case should vaccination be postponed beyond their sixth year.

Of the 444,055 (611,173) revaccinations, 119,951 (178,796) were successful, while the results of 65,071 (126,665) are reported as "unknown." The percentage of success in known cases was 31·65 (36·90) per cent.

The number of persons known to be successfully vaccinated and revaccinated per thousand of population in rural areas was 51·00 (58·07). High success rates in revaccination are reported from the districts of Bhamo, Tavoy, Upper Chindwin, Mergui, Myitkyina, Chin Hills, Thayetmyo and Lower Chindwin.

Urban Vaccination.—In the urban areas, excluding cantonments, 198,294 (286,121) operations were performed by regular vaccinators. Of these 46,822 (52,855) were primary and 151,472 (233,266) were revaccinations. Of the primary 45,395 (50,644) were successful, while the results of 1,054 (1,731) remained unverified. The success rate in

verified cases was therefore 99·19 (99·06) per cent. Forty-four (45) towns reported 100 per cent successes, 30 (28) towns reported successes between 90 and 100 per cent, while none (1) reported a success rate below 90 per cent. Of the 45,395 (50,644) successful vaccinations, 35,045 (37,869) were on infants under one year of age and 8,884 (10,501) on children of one to six years. The number of births recorded in urban areas, including cantonments, was 48,539 (49,069) and deaths under one year totalled 13,705 (12,859). The number of survivors according to these records was therefore 34,834 (36,210). The 35,541 (37,869) infants under one year successfully vaccinated including urban cantonments show an excess of 707 (1,659).

Of the 151,472 (233,266) revaccinations, 34,189 (62,534) were successful while the results of 20,249 (34,308) were not inspected. The percentage of success in verified cases was 26·05 (31·43) per cent. High success rates are reported from Nyaung-U, Bhamo, Shwedaung, Shwebo, Pegu, Kyonpyaw, Minhla and Kyaikto showing the necessity for pushing revaccinations in these towns: rates below 10 per cent from Minbya, Sandoway, Syriam, Henzada, Wakema, Yandoon, Shwegyin, Magwe, Chauk, Pakôkku, Myingyan and Sagaing.

The number of persons successfully vaccinated per thousand of population in towns was 56·56 (80·43).

Military Cantonments.—In the four Cantonments of Rangoon, Mingaladon, Mandalay and Maymyo, 1,947 (1,648) operations were carried out, *viz.*, 569 (620) primary and 1,378 (1,028) revaccinations. Of the 565 (617) primary verified cases, 560 (608) or 99·12 (98·54) per cent were successful. Of the 1,206 (964) verified revaccinations, 833 (241) or 69·07 (25·00) per cent were successful. This rate is very high and revaccination needs a good deal of improvement.

Railway Dispensary Staff.—These performed 1,143 (3,018) operations, of which 335 (714) were primary and 808 (2,304) revaccinations. Of the primary, 328 (688) were successful, 4 (15) being unverified. The success rate in verified cases was therefore 99·09 (98·43) per cent. Of the revaccinations, 320 (504) were successful, 42 (129) being unverified. The success rate in verified cases was therefore 41·78 (23·17) per cent. This rate is high and indicates the necessity of pushing revaccination.

Government Dispensary Staff.—These performed 2,572 (2,853) operations, of which 1,868 (1,529) were primary and 704 (1,324) revaccinations. Of the primary, 364 (226) were successful, 1,503 (1,302) being unverified. The success rate in verified cases was therefore 99·73 (99·56) per cent. Of the revaccinations, 110 (323) were successful, 288 (619) being unverified. The success rate in verified cases was 26·44 (45·82) per cent.

Private Medical Practitioners.—They carried out a total of 1,278 (2,212) operations. Of the 160 (250) primary operations, 143 (158) were successful and of the 1,118 (1,962) revaccinations, 137 (180) were successful—the number of unverified cases being 14 (91) in primary and 764 (1,086) in revaccinations. The success rate in verified cases was 97·95 (99·37) per cent in primary and 38·70 (20·55) per cent in revaccinations.

Jails.—Of the 45,383 (37,101) operations performed in the Jails in Burma, 626 (1,813) were primary and 44,757 (35,288) revaccinations. Of the primary cases 89·78 (82·24) per cent were successful and of the revaccinations 44·67 (44·95) per cent were successful.

Ports.—A total of 111,781 (133,237) operations was performed in the ports of Rangoon and Akyab on immigrants by sea, of which 1,864 (2,888) were primary and 109,917 (130,349) revaccinations. In the port of Bassein 38 (79) emigrants were revaccinated. The results remained unverified as the passengers were allowed to proceed to their destinations after vaccination.

Federated Shan States—A total of 65,698 (70,198) primary operations and 46,188 (36,091) revaccinations was performed by regular vaccinators in the rural areas of the Federated Shan States. Of the verified primary cases 98·94 (98·76) per cent were successful; of the verified revaccinations 50·98 (42·76) per cent were successful. The high success rate in revaccinations suggests the need for more revaccinations.

In the three towns of Lashio, Taunggyi and Kalaw, 1,545 (683) primary and 14,290 (434) revaccinations were performed. The success rate in primary cases was 99·93 (100·00) per cent and in revaccinations 43·01 (42·82) per cent.

The number of operations performed by other agencies in the rural areas was 1,741 (1,090) primary and 1,912 (2,090) revaccinations.

VERIFICATION WORK OF INSPECTING OFFICERS.

Burma.—The district and assistant district health officers verified 7·06 (7·52) per cent of the primary vaccinations and 5·61 (4·83) per cent of the revaccinations performed by the regular vaccination staff in the rural areas. It cannot be said that enough supervision was exercised by them when their number of verifications was so very low. In three districts, none of the cases were verified by the District Health Officers. In urban areas, municipal superintendents of vaccination (health officers) verified 30·23 (24·89) per cent of the primary vaccinations and 15·13 (14·88) per cent of the revaccinations performed by the regular vaccination staff.

In rural areas, inspectors of vaccination, public health inspectors, and public health sub-assistant surgeons inspected 67·02 (61·62),

per cent of the primary vaccinations and 57·08 (54·18) per cent of the revaccinations. In urban areas, the staff of the same status verified 68·23 (59·67) per cent of the primary vaccinations and 63·01 (56·89) per cent of the revaccinations. The percentages show an improvement but the number of verifications actually performed was slightly less in case of urban areas and much less in case of rural areas.

Federated Shan States.—The two public health inspectors and three head vaccinators inspected 41·95 (38·35) per cent of the primary vaccinations and 38·80 (23·89) per cent of the revaccinations in the rural areas.

Vaccine Dépôt, Meiktila.—The seed lymph used in the manufacture of vaccine lymph was rejuvenated by passing through the modified Nijland Cycle. A total of 18,861 (18,998) grammes of lymph, equalling 1,864,384 (1,878,973) doses, was manufactured during the year. Of this total, 487 grammes had to be destroyed on account of the animal being found to be diseased on post-mortem examination. A total of 15,955 (18,980) grammes, or 1,577,130 (1,877,193) doses of lymph was issued. All lymphs, before issue, were subjected to animal tests for bacterial contamination and to Calmette-Guerin's international potency tests on rabbits. Only lymphs which had given 100 per cent success without undue inflammation were issued. The success rate, reported to the Dépôt, in primary cases, was 98·70 (99·29) per cent and in revaccination cases was 37·30 (39·37) per cent.

In all 16 (12) cow-calves and 38 (39) buffalo-calves were vaccinated. The average yield per cow-calf was 79·56 (82·50) grammes and per buffalo-calf was 462·82 (461·79) grammes. One cow-calf was also hired for experimental purposes. The Malayan method of animal vaccination was used throughout the year, but instead of slaughtering the animals after washing, they were slaughtered before being washed.

The maintenance expenditure of the Dépôt was Rs. 32,247-1-3 (Rs. 35,069-3-11) and the total net income was Rs. 54,624-9-0 (Rs. 64,454-3-0) including Rs. 7,388-13-0 balance of the sale proceeds of vaccine lymph outstanding on the 31st March 1938 recovered during the year, but excluding Rs. 4,983-15-0 balance of this year's sale proceeds of vaccine lymph outstanding on the 31st March 1939. The excess of income over expenditure is therefore, after adjustment, Rs. 19,972-9-9 (Rs. 28,739-12-1). This does not include the value amounting to Rs. 2,173-3-0 (Rs. 2,235-3-0) of vaccine lymph supplied free to Government institutions.

No students were trained during the year.

COST OF THE VACCINATION DEPARTMENT.

Burma.—The total cost of the Department was Rs. 4,44,271-10-8 (Rs. 4,57,133-8-4). The average cost of each successful case was

Re. 0-10-6 (Re. 0-9-3). If, however, the sum of Rs. 49,640-9-0 realized from the sale of vaccine lymph in Burma be deducted from the total expenditure of Rs. 4,44,272-10-8, the net cost of the Department will be reduced to Rs. 3,94,632-1-8. The average cost of each successful case will then be Re. 0-9-4 (Re. 0-8-0).

High rates of average cost are reported from the following places :—

Districts.—Mandalay Rs. 1-6-10, Arakan Hill Tracts Rs. 1-1-0 and Salween Re. 0-15-11.

Towns.—Nattalin Rs. 6-8-11, Myitnge Rs. 5-9-8, Minbu Rs. 4-2-2, Kyaukpyu Rs. 3-5-6, Myaungmya Rs. 3-4-6, Magwe Rs. 3-4-4, Wakèma Rs. 3-3-8, Sagaing Rs. 2-13-8, Kyauksè Rs. 2-13-3, Moulmeingyun Rs. 2-11-2, Sandoway Rs. 2-10-9, Rangoon Rs. 2-10-2, Nyaung-U Rs. 2-10-0, Minbya Rs. 2-9-11, Ye-U Rs. 2-9-10, Syriam Rs. 2-7-11, Kyônpyaw Rs. 2-6-4, Kyaiklat Rs. 2-5-10, Letpa 'an Rs. 2-5-2, Minhla Rs. 2-3-5, Maymyo Rs. 2-2-11, Yandonn Rs. 2-2-5 and Pyawbwe Rs. 2-1-2.

Federated Shan States.—The total cost of the Department in the rural areas was Rs. 31,770-12-4 (Rs. 30,530-4 2) and the average cost was Re. 0-6-10 (Re. 0-7-3). The cost in the three notified towns was Rs. 1,281-9-6 (Rs. 1,351-6-0), the average cost being Re. 0-3-8 (Rs. 1-7-9).

GENERAL REMARKS.

The number of persons vaccinated and revaccinated shows a large fall owing to the very low incidence of smallpox—in fact the lowest on record for the last fifteen years. Prosecutions for failure to submit to vaccination were made in the districts of Henzada, Myingyan and Minbu and in the towns of Bassein, Pyapôn, Thatôn, Mergui, Myingyan, Pyinmana and Pyawbwe. The practice of illegal smallpox inoculation was not reported by any district or town. Thirty-four (52) village headmen were rewarded for assistance rendered to the vaccination department.

The rules for compulsory revaccination were introduced in three more towns, thus increasing the number to 55. Twenty-six (23) district councils have now introduced rules for compulsory revaccination.

APPENDIX B.

SANITARY ENGINEERING IN CONJUNCTION WITH THE
FUNCTIONS OF THE PUBLIC HEALTH DEPARTMENT
DURING 1938.

Water Supplies.—(a) In connection with Government buildings the following work was carried out besides minor improvements to other buildings :—Extension of the water supply in the 2nd Rangoon Battalion, Burma Military Police, Rangoon, to the new blocks of married men's and Armourer's Quarters.

Estimates were prepared for water supplies in the the Police Lines at Prome, Kyônpyaw and Maubin. A survey was carried out, and certain proposals outlined for the consideration of Government in connection with the improvement of the water supply to Maymyo Town.

(b) On behalf of Local Authorities, schemes for extending and improving the water supply at Bassein and Akyab Towns were scrutinised and modified, and projects in connection with the water supply for the Mandalay and Toungoo Civil Hospitals prepared.

Bazaars, Drainage and Conservancy.—Reports were made on minor bazaar schemes submitted by the Municipalities of Shwegyin, Bassein and Bhamo and by the Town Committees of Kamayut and Tharrawaddy and by rural local bodies in respect of Swa, Magyilaha and Moza Villages. Complete layouts of future bazaar buildings in the towns of Mônywa, Nyaunglebin and Yenangyaung were prepared. A scheme was drawn up for the disposal of night soil in Pyapôn Town and an estimate for improving the town drains of Akyab was scrutinised and modified where necessary.

Type Plans.—Type Plans for bazaar buildings, slaughter-houses, septic tanks, latrines and seed godowns were prepared.

Inspection.—Inspection of the general sanitary arrangements existing in towns, drainage and waterworks were made at Pegu, Minhla, Letpadan, Tharrawaddy, Myitkyina, Insein, Maymyo, Mandalay, Pyinmana, Yamèthin, Pyapôn, Bogale, Dedaye, Taunggyi, Tavoy, Mergui, Pyawbwe, Gyobingauk, Hlegu, Zigôn, Nattalin and Thônzè.

Administration of the Underground Water Act.—During the year 43 new permanent licences were granted including several relating to wells sunk before the Act came into force and which had hitherto escaped registration, and nine permanent licences were withdrawn owing to the abandonment of the tube wells in question. Thirty-three new temporary licences were granted and at the close of the year 17 of these still remained in force as progress had not advanced sufficiently far to permit of the issue of a permanent licence in these cases. Nine temporary licences expired on the abandonment of the attempt to find water which was insufficiently successful. The total number of permanent licences on the register relating to tube wells still in use at the end of year was 404.

APPENDIX C.

SANITARY CONDITION IN MINES.

A. Thaton District.

Out of seven quarries and seven mines in Thatôn District only three quarries were visited by the District Health Officer during the year and the following remarks on the sanitary condition of the quarries are based on his report :—

Labour and General Health.—Both males and females were employed in the quarries but the majority were males. None were under age. In all the quarries a certain number were employed on a permanent basis and given monthly wages and the others were entertained on a temporary basis and paid according to the amount of work turned out. The coolies appeared to be fairly healthy. There were very few cases of sickness among the permanent labourers but the same cannot be said of the temporary hands as they just stayed away if sick.

Housing Condition.—Barracks were provided by the mining companies for permanent coolies who were mostly Indians. The temporary employees, who were mostly Burmans, lived in the villages nearby. The coolies themselves looked after the cleanliness of the barracks and their vicinity.

Water Supply.—The management have provided wells with parapet and platform for the use of the labourers.

Latrines.—No latrines were provided for the coolies, who usually resorted to the nearest fields and bushes for calls of nature. Even in one quarry where bucket system of nightsoil removal was introduced, it is stated that the labourers preferred the open air.

B. Mergui District.

During the year the District Health Officer inspected four tin mines. In the Thabawleik Tin Mine there was a qualified doctor who besides attending the small hospital, supervised the general health conditions in the mining area. In the Yamone, Gyaw chaung and Gogarate Tin Mines sufficient medical equipment was kept in readiness for emergency use. Housing arrangements were reported to be satisfactory, as also the foodstuffs kept for issue to the labourers and staffs. Water supply in the last two mines was, however, not reported to be satisfactory and the managers of the mines were instructed to set apart one good well in each mine for drinking purposes only.

C. Tavoy District.

The District Health Officer, Tavoy, reports on the sanitary condition in mines in his district as follows :—

1. *Health Conditions.*—(a) The general health of labourers except for malaria was good. (b) During the rains malaria was prevalent in

most of the mines. In some of the mines like Kanbouk and Pyingyi the incidence was low but in others such as Kalonta, Pagaye, Hermingyi, Taungpila the incidence was high. (c) There was no outbreak of any epidemic disease. Most of the mining population are protected against small-pox. (d) Several of the mines have small hospitals either in charge of a Medical Officer of the Sub-Assistant Surgeon Cadre or a Compounder. Others again maintain a few simple drugs and dressings and others again nothing in the way of medical aid.

2. *Housing Conditions*.—The housing conditions in all the mines inspected by me was good.

3. *Sanitation*.—The general sanitation of all mines inspected by me was more or less good. Some mines have latrines on the bucket system and others on the pit system.

Rank vegetation in the mines is kept down during the cold and dry seasons. During the rains it is kept down as far as possible.

In most of the big mines the water supply is a pipe one. The other mines have their supply from wells.

The underground workings at Hermingyi have a pure supply of air and plenty of ventilation.

Most of the large mines employed sweepers who attend to the latrines and the general cleanliness of the camp.

D. Southern Shan States.

Mining operations are carried out only at Mawchi, situated in the Bawlaik State in the Karenni Subdivision. It is reported that the company keeps a good water supply, provides housing accommodation and gives medical relief to its workers and staff. The general health of the people is reported to be good.

E. Burma Corporation, Limited, Namtu.

Sanitation.—The health of the permanent inhabitants of this area was good. With the exception of malaria, no disease appeared in epidemic form during the year. The sanitary condition of the area was good as evidenced by the absence of the acute intestinal infections in epidemic form.

The replacing of pit latrines by bucket latrines was accomplished wherever possible. Very few pit latrines remain in this area. The result of doing away with pit latrines was the lessening of the adult fly nuisance. Very few flies were found in Namtu area during the year.

Rubbish was cleared away daily and burned in the dumping pits.

During the year the roads leading from Namtu to Panghai and Ehaung were metalled, steamrolled and tarred. The streets were also treated in the same way. This gave the district a clean appearance and made scavenging easy. Cement roadside drains were laid down in Panghai and Ehaung.

Food Supply.—There was a plentiful supply of meat, fowl, fish, vegetables and fruit throughout the year. The milk supply was not as good as it should be as the vendors add water to their milk which in many cases has already been skimmed of cream. Many raids were made and the guilty salesmen were fined by the Assistant Superintendent.

The employees of Burma Corporation earn good wages and are inclined to go in for "luxuries" such as tinned meats, fish and fruits in preference to foodstuffs that require cooking. No evil effects resulting from this preference of tinned foods was observed, although the preparation and tinning of them must destroy some of the vitamins.

There was a plentiful supply of good drinking water available throughout the year. There has never been a shortage in this District.

Registration of Births and Deaths.—The notification of all births and deaths in the Burma Corporation, Limited, area was sent monthly to the Assistant Superintendent. Unfortunately this could not be done for Panghai and Ehaung for which villages the Headmen appointed by the Assistant Superintendent, are responsible.

Blood Examination for Malaria Parasites.

1938.	M. T.	B. T.	Q. P.	Mixed infection.	Total Malaria.	Non-Malaria.
January ...	114	5	4	2	125	174
February ...	51	3	2	...	56	156
March ...	41	1	...	...	42	160
April ...	64	5	1	1	71	120
May ...	82	11	1	1	95	151
June ...	153	2	...	3	158	178
July ...	249	5	...	5	259	260
August ...	178	3	...	2	183	339
September ...	81	7	...	...	88	312
October ...	83	...	1	1	85	253
November ...	87	3	2	4	96	209
December ...	47	2	2	...	51	234
Total ...	1,230	47	13	19	1,309	2,546

Percentage of blood in which malaria parasite was found ... 34

This low percentage is probably due to self-administration of quinine by the patients before applying for treatment.

MOSQUITOES.—

Comparative prevalence of anopheline species (larvæ.)

Species.			Number of larvæ found.	Percentage.	Number of Breeding Places.	Percentage.
Maculatus	...	...	118	62·10	42	56·76
Minimus	...	...	24	12·63	6	8·11
Vagus	...	...	20	10·53	5	6·76
Maculipalpis	...	...	11	5·79	10	13·52
Aitkeni	...	...	6	3·16	2	2·70
Culicifacies	...	...	4	2·10	3	4·05
Gigas	...	...	2	1·05	1	1·35
Fuliginosis	...	...	2	1·05	2	2·70
Barbirostris	...	...	1	0·53	1	1·35
Kochi	...	...	1	0·53	1	1·35
Jeyporensis	...	...	1	0·53	1	1·35
Total			190	100·00	74	100·00

MALARIA.—	...	...	{	Number of cases	...	5,437
			{	Number of deaths	...	63
			{	Death rate per hundred	...	1·1587

There was a decrease in the incidence of this disease as compared with the previous year. The majority of the infected persons were non-employees who had lately arrived in this district. (The Chinese coolies who arrive in October and November usually get infected before reaching this area.)

BLACKWATER FEVER.—	...	{	Number of cases	...	7
			Number of deaths	...	2
			Death rate per hundred	...	28·5714

There was an increased incidence of this disease. The patients came from areas outside of the protected zone and were all chronic malarial subjects with enlarged spleens.

ENTERIC GROUP OF FEVERS.—	{	Number of cases	...	56
		Number of deaths	...	10
		Death rate per hundred	...	17·8571

Four attacks of typhoid occurred among the better class residents. The original cause of these infections was not actually traced.

Two of the persons attacked had visited a neighbouring area where typhoid was prevalent and the blood serums of both showed agglutinating power with an emulsion of *Paratyphoid A*. One patient did not leave the area but usually obtained and used vegetable and fruit from the same neighbouring town. This patient's serum agglutinated *Paratyphoid A*. The serum of the other case showed agglutination with *B. Typhosus*.

As there seemed to be a danger of the disease spreading in epidemic form, it was decided to offer inoculation with T.A.B. vaccine to all volunteers. Four hundred and twenty-four persons applied for and were given protection against these intestinal infection.

LEAD POISONING.—

No case of permanent disability due to paralysis resulting from lead poisoning occurred. Two employees were treated for wrist drop. Full function was restored to the affected muscles.

No case of lead encephalopathy was seen.

As the ore extracted from Bawdwin Mine is the insoluble sulphide of lead there is no danger of lead poisoning occurring among the employees working underground.

A few employees were suffering from anæmia. As no stippled cells were found in their blood when examined microscopically, they were treated as cases of simple anæmia. There was complete recovery.

TUBERCULOSIS OF LUNGS.—	{	Number of cases	...	73
		Number of deaths	...	29
		Death rate per hundred	...	40

Phthisical patients in this district are from the unemployed class. They usually drift into the district and live by begging until they become too feeble and then they apply for treatment. They are isolated in the infectious diseases wards of the Hospital. When they show improvement they are discharged and sent back to their home district when possible. The Chinese cooly class seems to be more often attacked than the other inhabitants.

DYSENTERY—BACILLARY.—	{	Number of cases	...	81
		Number of deaths	...	Nil

This disease did not appear in epidemic form during the year. The bacilli causing the disease in this district is of the mild group.

AMOEBIC DYSENTERY.—	...	{	Number of cases	...	35
			Number of deaths	...	Nil.

There was a decrease in the number of persons applying for treatment for amoebic dysentery.

PNEUMONIA.—	...	...	{	Number of cases	...	98
				Number of deaths	...	27
				Death rate per hundred	...	27.551

There is a high mortality among the natives infected with this disease. Usually the patients are treated at home for "fever" by unqualified practitioners and when the symptoms become worse, they are sent to Hospital.

DIPHTHERIA.—	...	...	{	Number of cases	...	10
				Number of deaths	...	4
				Death rate per hundred	...	40

Diphtheria is more common in this district than is shown by the above number of cases. Enquiries made show that "sore throat" is well known among the inhabitants but it is thought by them that unless there is a swelling below the angle of the jaw, there is no danger. However, it is becoming usual for the parents to bring children with sore throat for inspection.

SMALL-POX.—	...	...	{	Number of cases	...	1
				Number of deaths	...	Nil

A cooly employed in Bawdwin developed small-pox. He was isolated and all the contacts were quarantined and vaccinated. No other case occurred.

HOOKWORM DISEASE.—	...	{	Number of cases	...	46
		}	Number of deaths	...	<i>Nil</i>

Forty-six patients were found harbouring hookworm. They were given treatment for that infestation. There was a decrease in the number of patients found with hookworm.

BERI-BERI.—	...	...	{	Number of cases	...	9
			}	Number of deaths	...	<i>Nil</i>

The patients admitted for treatment were non-employees of the cooly class. They cleared up rapidly on getting anti-beri-beri diet.

PUERPERAL SEPSIS.—	...	...	{	Number of cases	...	29
			}	Number of deaths	...	1

In this district where ante-natal advice and treatment can be obtained it is difficult to understand why the majority of child-bearing women do not take advantage of the scheme. They prefer to remain at home during childbirth and only seek advice when they are in a septic condition.

DOG-BITE.—	...	...	{	Number of cases	...	13
			}	Number of deaths	...	<i>Nil</i>

Twelve of the persons bitten by dogs were treated in Namtu. One who was bitten seriously was sent to Rangoon. The persons treated in this hospital have remained in good health.

CHOLERA INOCULATIONS.—The annual cholera inoculation of all employees and villagers exposed to the risk of cholera was done in April. All the workers on the Railway line are given two doses of anti-cholera vaccine before employment.

MATERNITY AND CHILD WELFARE.—

Number of cases	{	Normal labour	...	243
			}	Abnormal labour	...	24

Number of deaths from abnormal labour	<i>Nil</i>
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Number of women admitted to Hospital for ante-natal treatment		113
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Number of children treated in Hospital	2
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The number of childbirth cases requiring operative interference seems high. It must be remembered that many women are brought for treatment in Hospital after several days' labour at home. Usually it is necessary to terminate the labour as soon as possible.

J. HUGHES, M.B., B.S., D.P.H.,

Chief Medical Officer.

APPENDIX D.

PORT HEALTH DEPARTMENT ADMINISTRATION DURING 1938.

AKYAB.—The total number of incoming vessels that called at this port was 160, of which 125 came from Indian posts and 35 from foreign ports. They carried 23,642 passengers and 11,850 crew. All of them were medically inspected on arrival. As a result, 19,617 passengers were vaccinated. Twenty-one passengers were tested for rise in temperature and other signs of illness, of whom 15 were found sick. One case of chicken-pox, one of small-pox and six ordinary deaths were also reported. There were 69 vessels which sailed for ports beyond India; they carried 1,968 Asiatic and 288 European crew.

KYAUKPYU.—No medical inspection was made as only coastal vessels plying from Chittagong to Rangoon *via* Akyab touched at this port on their journeys to and fro.

BASSEIN.—Medical inspection was made of 84 vessels arriving from Indian and foreign ports and they carried two passengers and 5,698 crew. Of the latter 4,557 were Asiatics. Vessels proceeding beyond India numbered 13 and the effects of their 733 Asiatic and African crew were disinfected.

MOULMEIN.—Thirty-three vessels from Indian ports and 21 from foreign ports were inspected on their arrival. None of the vessels carried passengers and no case of infectious disease was detected amongst the crew. No medical inspection was made of the outgoing vessels as they all proceeded to one or other of the Burma ports but bills of health were issued to 24 vessels at the request of their commanders.

MERGUI.—Incoming vessels numbered 53 and they carried 326 passengers and 4,229 crew, who all were inspected on arrival. Outgoing vessels totalled 51 and they had 559 passengers and 4,188 crew.

TAVOY.—The British India Steam Navigation Company's steamers plying fortnightly between Rangoon and Penang called at the Tavoy port 25 times on their homeward journeys during the year. Two hundred and fourteen passengers who landed at Tavoy from these steamers were examined by the Sub-Assistant Surgeon on duty. Of these, 69 were immigrants from foreign ports.

ANNUAL REPORT OF THE PORT HEALTH OFFICER OF RANGOON FOR THE YEAR 1938.

Inspection of Incoming Vessels.

1. INCOMING VESSELS INSPECTED.—The total number of vessels inspected in the year was 1,209 or 14 more than in 1937. Of these 801 were from Indian and 408 from foreign ports. They carried 116,730

crew and 216,090 passengers, the figure being less than that of 1937 by 2,612 and 29,623 respectively. In addition, a number of passengers totalling 5,861 from ports in Burma were examined at Rangoon. These passengers embarked at Akyab, Kyaukpyu and Sandoway on vessels which were on their way to Rangoon from Indian ports.

2. INFECTIOUS DISEASES.—Twenty-two cases of infectious diseases (two more than in 1937) were reported by Commanders on 21 vessels, viz., 1 cholera, 4 small-pox, 7 chicken-pox, 8 measles, 1 mumps, and 1 typhoid. All the cases were sent to the Contagious Diseases Hospital, Rangoon, with the exception of 4 small-pox left at other ports. One case of chicken-pox and one case of measles being through passengers were allowed to stay on board under ships' doctors' undertaking and one case of chicken-pox was allowed to go to his residence.

The following unreported cases of infectious diseases were detected on 32 vessels by the Port Health Staff during the course of Medical Inspection :—

Two cases of small-pox, 26 cases of chicken pox, 7 cases of measles, 1 case of mumps and 1 case of cerebro-spinal meningitis. They were removed to the Contagious Diseases Hospital, Rangoon.

Nineteen lepers were found during the inspection of passengers.

The following cases are reported briefly as they appear to me to be of some interest :—

(a) *Epidemic dropsy on Motor Barge "Hmawbi" of Messrs. Steel Brothers & Company, Limited, Rangoon.*—On receipt of a copy of a telegram, dated the 23rd August 1938, from the District Health Officer, Henzada, to the Director of Public Health, Burma, Rangoon, stating that most of the crew of the Motor Barge "Hmawbi" were suffering from epidemic dropsy, the Barge was brought to the Port Health Station and the crew were examined. It was found that no fresh vegetables were eaten by the crew. Four serious cases were sent to the Rangoon General Hospital. The others were kept under company's medical officer. It was mentioned that some men of the company's depôt were similarly suffering from swelling of legs. All the men recovered. A detailed report was sent on the 3rd September 1938.

(b) *Outbreak of epidemic dropsy on the S.S. "Jalagopal".*—Dr U Maung U, Officiating Assistant Port Health Officer, on scrutinising the Bill of Health of the S.S. "Jalagopal" on her arrival here from Chittagong on the 11th November 1938, found a note made by the Port Health Officer of that port to the effect that six saloon crew were suffering from beri-beri and that as rice and ghee taken from Rangoon were found bad, he advised that they should not be consumed.

He examined all the crew of the vessel and found that seven of the saloon crew had varying degrees of oedema on their legs. They were brought to the Port Health Station where they were examined.

thoroughly. They were found to be recovering from the disease. The swelling of the feet was the only subjective symptom. Provisions of ships leaving Rangoon for Chittagong are not subject to examination before taking on. As the cases were all recovering they were left on board with necessary instructions. A detailed report was sent on the 22nd November 1938.

3. DEATHS FROM NON-INFECTIOUS DISEASES.—Five such deaths were reported on five vessels.

4. VACCINATIONS PERFORMED.—The number of passengers examined under the Vaccination Act was 216,090. Of these 131,835 were found protected against small-pox and 84,255 were vaccinated. In addition, 297 vaccinations were performed among the members of the ships' crew. The large number of vaccinations totalling 84,552 is satisfactory and constitutes a very important preventive measure against small-pox not only for Rangoon, but also for the whole country.

5. DISINFECTION.—Disinfection of the effects of 430 members of the crew and 325 passengers were carried out.

6. RIVERINE VESSELS.—The following deaths and cases were reported on riverine launches and cargo lighters during the year.

Six deaths from non-infectious diseases, 4 cases of chicken-pox, 1 case of measles, 1 case of mumps and 6 fever cases. All the precautionary measures were taken by this department.

Inspection of Outgoing sea-going vessels..

7. There were 572 vessels proceeding to ports beyond India or 18 more than in 1937. The effects of all the members of the Asiatic and African crew 41,757 in number and deck passengers 14,767 in number were disinfected. European crew totalling 12,261 and saloon passengers 3,962 were inspected. Vaccination was done on 301 crew and 1,237 passengers.

Coolies totalling 2,954 were inspected and their body clothes and uniforms were disinfected in steam prior to their handling passengers' luggages.

Temperature was tested on 229 members of crew and passengers. Of these, 199 were allowed to embark on the Commanders' responsibility. Seventeen were sent to hospitals in Rangoon and 13 were allowed to go to their residences.

No case of plague is known to have developed amongst the crew or passengers of these vessels on their outward voyages.

8. New members of the crew inspected prior to signing on the ships articles totalled 3,999. Of these 3,902 were passed fit and 97 were rejected. Three thousand two hundred and twenty-one members of the crew were re-vaccinated,

9. VESSELS IN HARBOUR.—The following cases and deaths were reported on 15 vessels in harbour during the year. Four deaths from non-infectious diseases, 4 cases of chicken-pox and 14 cases of fever. All the necessary sanitary measures were taken by this department.

10. Inspection of measures to prevent ingress of rats into vessels at wharves was carried out.

11. CHLORINATION OF WATER.—Chlorination of water was carried out on five sea-going vessels and on six water barges during the year. Seven tube wells were inspected and samples were taken for bacteriological analysis.

12. PASSENGERS BY SEA-PLANES.—With reference to the Public Health Department letter No. 4498/3St.-10, dated the 8th March 1938, from the Director of Public Health, Burma, 328 incoming and 372 outgoing passengers by sea-planes were inspected by this department at the time of disembarkation and embarkation.

Miscellaneous Transactions and Remarks.

13. PORT OFFICE PERSONNEL.—Two hundred and forty-five men were examined, out of which 237 were passed fit and eight rejected. One hundred and eighty-eight were re-vaccinated.

14. FUMIGATION.—(a) Forty-four vessels were fumigated to comply with the measures in force at the ports of destination. Seven hundred and sixty-two rats were destroyed. This figure represents the number of rats which were found in empty vessels only, after fumigation. The number of rats destroyed on loaded vessels could not be ascertained as they left the harbour immediately after fumigation.

No. of Vessels.	Loaded.	Empty.	Rats collected.	Rats destroyed.	Rats examined.	Rats found infected with plague.
44	18	26	762	762	272	Nil

(b) Deratization Exemption Certificates were issued to 49 vessels after inspection. One hundred and seventy-two rats were destroyed.

No. of Vessels.	No. of Traps.	Rats collected.	Rats destroyed.	Rats examined.	Rats found infected with plague.
49	6,626	172	172	172	Nil

(c) Number of pamphlets on venereal diseases distributed among 82 ships' crew were 1,160 in English and 1,955 in Chittagonian languages during the year.

15. INOCULATION AGAINST CHOLERA.—Two hundred and fifty-seven anti-cholera inoculations were carried out on passengers and members of crew.

16. Non-infectious cases reported and detected were 1,206.

17. INSPECTION OF PROVISIONS FOR LASCAR CREW.—The provisions for Asiatic crew on 297 ships were examined. Two hundred and forty-three samples were taken and analysed at the Harcourt Butler Institute of Public Health, Burma, Rangoon.

The results were as follows :—

<i>Samples.</i>	<i>Good.</i>	<i>Unsatisfactory.</i>
Rice ...	59	50
Ghee ...	109	8
Mustard oil ...	3	1
Flour ...	3	...
Dhal ...	8	...
Tea ...	1	...
Atta ...	1	...
	<hr/> 184	<hr/> * 59

* Replaced by articles of good quality.

Out of 109 samples of rice examined, 19 samples were from the Port Commissioners' Stores Department who supply rations to the crew of their flotilla. Of these, 10 samples were found to be good and nine bad. Recommendations to that effect were made.

Two thousand four hundred and eighty tins of ghee mostly belonging to Messrs. The British India Steam Navigation Company Ltd., were examined by this department and sealed. Samples taken from these tins were on examination found to be genuine.

18. INSPECTION OF MEDICINE CHESTS AND APPLIANCES.—During the year medicines and appliances on seventeen vessels were inspected and fourteen were found to be short. The agents were written to and the defects were remedied.

19. PORT COMMISSIONERS' AREA—(a) *Sanitation*.—The sanitation of the Port Commissioners' area which runs on the north side of the river from Neikban to Monkey Point and thence to the Salt Depôt as well as part of Kanaungto, Dalla, King's Bank, Syriam Signal Station, River Lights and Mingalocn Radio Station was under my charge. The 1931 census gives the population of the area as 16,926. The following health staff was employed by the Port Commissioners :—

Sanitary Inspector ...	...	1
Assistant Sanitary Inspectors ...	...	2
Sanitary Sub-Inspector ...	...	1
Sanitary Clerk ...	...	1
Sanitary Jemadars ...	...	2
Sanitary Maistries ...	...	7
Sanitary Permanent Coolies ...	...	103
Peon ...	...	1
Plumber ...	...	1

The sanitation of the area was kept at a high standard.

(b) The annual vaccination of all the employees of the Port Commissioners was commenced on the 31st January 1938 and was completed on the 7th March 1938. All the employees were examined and those unprotected were vaccinated. The total number of vaccinations performed was 3,532

(c) *Stegomyia Mosquito Control*.—All the buildings and godowns in the Port Commissioners' area are numbered and two Assistant Inspectors and four coolies search the area. The work starts on a Monday and finishes on a Friday. It is usually done in the morning for a period of $2\frac{1}{2}$ hours. In the afternoon any larvæ caught in the area are brought to the office, identified and recorded. On Saturdays the figures of the five previous days are compiled and weekly statement made out. The coolies are also trained to look for likely places and to oil regularly those places in order to destroy any larvæ which may be present. During the month of May just after the monsoons have set in oil-balls are put in all the roof gutters on the various buildings and godowns. These balls are inspected every month and fresh oil is added until October when the rains are over. The *Stegomyia* Index of the port area for the year was found to be as low as 1·87.

(d) *Ratting and Trapping*.—The total number of rats destroyed by trapping during the year was 3,391.

(e) *Cymag Fumigation of Rat Burrows*.—Besides trapping, cymag fumigation of rat burrows in the area was carried out throughout the year. A total of 2,548 burrows were gassed and 5,520 connecting holes were blocked during the year. The total number of rats destroyed during the year by this method was 404.

(f) *Smoking out of Rat Burrows*.—A total of 7,726 rat holes were smoked with the coal tar fumes. The number of rats destroyed by this method was 1,499.

(g) Five thousand two hundred and ninety-four rats were caught and destroyed in the Port Commissioners' area by trapping, smoking and cymag fumigation throughout the year. Out of these, 2,802 were sent to the Harcourt Butler Institute of Public Health, Burma, Rangoon, for examination. The following statement shows the species of rats examined at the Institute.

No. of rats.	Species						Kind of bait.	No. of infected rats.
	N. Beng.	R. Rat.	M. Con.	R. Nor.	M. Mus.	C. Coer.		
2,802	927	187	760	187	438	303	Bread and ghee.	Nil

(h) *Inspection of Meat and Food*.—Inspection of imported food is done by the Municipal Health Department. In cases where the consignment is not taken delivery of for some time on account of its being unsatisfactory, the Port Health Officer is requested by the Traffic Manager, Port Commissioners, Rangoon, to do the inspection and make recommendations regarding their disposal. Several such inspections were carried out.

19. PORT HEALTH STAFF.—The staff has worked to my entire satisfaction.

J. A. ANKLESARIA,
K.-i-H., M.B., B.S., D.P.H., D.T.M. & H.,
Health Officer for the Port of Rangoon.

TABLE No. I.—Details of Incoming Seagoing Vessels inspected during the year 1938.

Month.	(1)	From Indian Ports.						From Foreign Ports.						Total.	
		Number of crew.			Number of Passengers.			Number of vessels.	(10)	Number of Passengers.				Number of vessels.	(16)
		(2)	(3)	Males. (4)	Females. (5)	Boys. (6)	Girls. (7)			Males. (11)	Females. (12)	Boys. (13)	Girls. (14)	Total. (15)	
January	...	67	6,499	15,007	1,259	693	492	32	3,301	1,428	469	179	134	2,210	99
February	...	68	6,404	16,304	1,531	744	486	34	2,873	885	235	75	55	1,250	102
March	...	77	7,425	15,092	1,492	805	540	43	3,784	1,140	319	142	92	1,693	120
April	...	71	6,851	12,017	1,463	788	532	41	3,527	1,377	436	200	182	2,195	112
May	...	71	7,169	15,374	2,066	1,240	757	39	3,607	1,114	305	129	117	1,665	110
June	...	65	6,255	13,739	1,541	822	575	31	2,933	846	236	115	88	1,285	96
July	...	59	5,784	9,672	1,050	582	385	28	3,030	871	333	172	141	1,517	87
August	...	65	6,111	7,283	865	332	259	30	3,340	725	233	116	83	1,157	95
September	...	55	5,701	6,030	809	309	249	34	3,108	772	226	105	64	1,167	89
October	...	68	6,307	9,741	900	425	311	34	2,979	1,054	441	208	135	1,838	102
November	...	70	6,856	24,350	1,587	868	584	31	3,169	1,031	369	91	94	1,585	101
December	...	65	6,887	22,465	1,551	873	575	31	2,830	727	271	63	53	1,114	96
Total	...	801	78,249	167,074	16,114	8,481	5,745	408	38,481	11,970	3,873	1,595	1,238	18,676	1,209
															116,730

TABLE No. I.—*Details of Incoming Seagoing Vessels inspected during the year 1938—concl'd.*

Month.	Total—concl'd.					Medical Inspection and Observation.											
	Number of passengers.					Total inspected.		For temperature.		For vaccination.				Disinfection.			
	Males. (18)	Females. (19)	Boys. (20)	Girls. (21)	Total. (22)	Crew. (23)	Passengers. (24)	Tested. (25)	Sick. (26)	Crew.		Passengers.		Vessels. (31)	Effects of		
										Found protected. (27)	Vaccinated on wharf. (28)	Found protected. (29)	Vaccinated on wharf. (30)		Crew. (32)	Passengers. (33)	
(1)																	
January	16,435	1,728	872	626	19,661	9,800	19,661	81	70	9,602	198	11,981	7,680	1	134	43	
February	17,189	1,766	819	541	20,315	9,277	20,315	102	90	9,209	68	12,676	7,639	2	87	244	
March	16,232	1,811	947	632	19,622	11,209	19,622	92	80	11,204	5	13,018	6,604	12	120	38	
April	13,394	1,899	988	714	16,995	10,378	16,995	80	68	10,376	2	11,538	5,457	4	89	...	
May	16,488	2,371	1,369	874	21,102	10,776	21,102	90	79	10,776	...	14,472	6,630	3	...	...
June	14,585	1,777	937	663	17,962	9,188	17,962	115	104	9,185	3	12,289	5,673	1	...	...
July	10,543	1,383	754	526	13,206	8,814	13,206	77	69	8,814	...	10,002	3,204	1	...	...
August	8,008	1,098	448	342	9,896	9,451	9,896	63	52	9,448	3	8,217	1,679	...	...	...
September	6,802	1,035	414	313	8,564	8,809	8,564	62	54	8,803	6	5,911	2,653	...	...	...
October	10,795	1,341	633	446	13,215	9,286	13,215	89	79	9,284	2	7,170	6,045	2	...	...
November	25,381	1,956	959	678	28,974	10,025	28,974	148	131	10,015	10	12,425	16,549	4	...	...
December	23,192	1,822	936	628	26,578	9,717	26,578	142	121	9,717	...	12,136	14,442	1	...	...
Total	179,044	19,987	10,076	6,983	216,090	116,730	216,090	1,141	997	116,433	297	131,835	84,255	31	430	325	

TABLE NO. II.—Details of Outgoing Seagoing Vessels bound for Ports beyond India, inspected during the year 1938 —concl'd.

Month.	Diseases.				Disposal of Sick.						Disinfection.				Fumigation with Clayton Apparatus at agent's request.				Vaccination.	
	(21) Plague.	(22) Small-pox.	(23) Chicken-pox.	(24) Fever and other ailments.	(25) Civil General Hospital.	(26) Municipal Observation Hospital.	(27) Contagious Diseases Hospital.	(28) Passengers' residence.	(29) Other Hospitals.	(30) Asiatic crew and deck passengers.	(31) Boots and shoes.	(32) Baggage coolies.	(33) Boxes.	(34) Vessels.	(35) Sulphur consumed.	(36) Time spent.	(37) Amount realized and Fees.	(38) Crew.	(39) Passengers.	
(1)																				
January	4	...	...	...	4	...	3,828	...	253	319	4	lb. 4,876	H. 44 M. 45	Rs. 1,350 75 1,425	37	300	
February	3	2	...	...	1	...	4,358	...	238	603	3	3,008	29 30	900 75 975	35	107	
March	3	1	2	...	...	...	6,181	...	329	833	4	6,305	42 30	1,600 125 1,725	26	103	
April	1	3	...	1	1	2	...	7,295	...	308	614	3	4,741	33 5	1,150 75 1,225	21	131	
May	2	2	...	...	...	...	5,113	...	233	706	3	3,993	28 30	1,225 1,050 75 1,125	15	84	

[illegible]

TABLE NO. III.—Statement showing the Infections and other Diseases reported and detected on Incoming Seagoing and Riverine Vessels during the year 1938.

Diseases.	Seagoing.			Riverine.		In Port.		Disposal of Cases.								Corpses.				Remarks.							
	Number of vessels.	Cases.		Number of vessels.	Cases.	Number of vessels.	Cases.	Hospitals.								Buried at Sea.	Rangoon Mortuary.	Buried by relatives.	Total.								
		Total.	Reported.					Detected.	Contagious Diseases.	Observation.	Rangoon General Hospital.	Military.	Leprosy.	Residence.	Left on Board.						Left at other Ports.	Other Hospitals.	Total.				
																								(2)	(3)	(4)	(5)
...
Cholera	1	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Smallpox	6	6	4	2	...	...	...	...	2	...	...	...	...	...	...	4	...	6	...	...	...	...	...	...	...	...	...
Chickenpox	30	33	7	26	3	4	3	4	39	...	...	...	...	1	1	...	41	...	...	...	...	...	...	...	...	...	...
Measles	11	15	8	7	1	1	...	...	15	...	...	...	...	...	1	...	16	...	...	...	...	...	...	...	...	...	...
Mumps	2	2	1	1	1	1	...	...	2	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...
Typhoid	1	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...

Cerebrospinal meningitis	1	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
Influenza	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dengue	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suspicious illness	221	648	16	632	1	1	2	2	...	651	...	...	...	...	...	...	...	...	...	...	...	...	...
Ordinary illness	203	519	59	460	1	5	6	12	...	28	22	...	88	384	...	14	536	...	...	...	...	...	...
Leprosy	17	19	3	16	...	...	...	...	...	...	...	3	16	...	...	...	19	...	...	...	...	...	...
Enlarged glands	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Deaths (ordinary)	5	5	5	...	6	6	4	4	...	...	...	...	...	...	...	...	...	3	12	...	...	...	15
Total	498	1,250	105	1,145	13	18	15	22	61	652	28	22	3	105	386	4	14	1,275	3	12	...	...	15

STATEMENT A.—*Statement showing Total Income from all sources and*

Name of Division.	Total Receipts including opening balance.	Total Ex- penditure on Public Health purposes.	Amount			
			Water supply.		Drainage.	
			Capital outlay. (4)	Establish- ment, repairs, etc. (5)	Capital outlay. (6)	Establish- ment, repairs, etc. (7)
(1)	(2)	(3)				
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Towns in—						
Arakan Division ...	3,66,339	1,35,893	300	17,634	...	1,212
Pegu Division ...	3,28,16,550	45,92,405	11,26,532	8,05,915	5,153	2,58,256
Irrawaddy Division ...	17,52,829	3,97,609	3,010	16,109	280	9,161
Tenasserim Division ...	16,16,607	3,55,348	...	33,892	1,357	8,914
Magwe Division ...	8,30,418	2,11,586	1,219	44,577	...	7,733
Mandalay Division ...	29,47,759	6,73,878	17,297	69,060	700	34,309
Sagaing Division ...	7,16,490	1,53,843	316	8,850	249	1,648
Total ...	4,10,46,992	65,20,562	11,48,674	9,96,037	7,739	3,21,233
Districts in—						
Arakan Division ...	7,10,486	51,747	...	495	...	568
Pegu Division ...	29,67,660	2,02,985	7,996	2,411	...	...
Irrawaddy Division ...	32,15,987	1,80,784	11,197	5,250	...	...
Tenasserim Division ...	20,48,494	75,103	2,055	192	...	...
Magwe Division ...	13,38,096	1,04,712	864	7,506	...	...
Mandalay Division ...	14,40,237	97,743	122	1,295	...	...
Sagaing Division ...	14,25,552	1,21,471	...	5,093	...	1,044
Total ...	1,31,46,512	8,34,545	22,234	22,242	...	1,612
GRAND TOTAL, BURMA ...	5,41,93,504	73,55,107	11,70,908	10,18,279	7,739	3,22,845
Federated Shan States—						
Towns ...	2,80,114	67,490	5,975	9,152	...	5,064
Rural Areas ...	1,01,07,291	65,552	...	2,644	...	9,597
Total ...	1,03,87,405	1,33,042	5,975	11,796	...	14,661

Expenditure on Public Health purposes during the financial year 1937-38.

pent on

Conservancy (including road cleaning and watering) and latrines. (8)	Epidemic charges (includ- ing plague). (9)	Vaccination. (10)	Registration of births and deaths. (11)	Markets and slaughter-houses. (12)	Charges on account of Health Officers and Public Health Inspectors. (13)	Other sanitary requirements. (14)
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
76,053	3,467	3,162	1,380	18,522	12,689	1,474
14,92,076	8,763	56,602	56,853	3,40,014	2,81,996	1,60,245
2,03,507	12,121	9,676	4,826	84,292	47,022	7,605
1,91,247	3,409	8,269	7,256	57,755	36,690	6,559
87,317	3,506	5,288	1,973	41,692	15,928	2,353
3,18,596	14,490	11,808	8,830	1,20,035	65,116	13,637
75,780	1,823	3,164	1,406	46,600	9,010	4,997
24,44,576	47,579	97,969	82,524	7,08,910	4,68,451	1,96,870
7,100	161	25,687	...	9,262	7,196	1,278
33,357	4,132	48,876	...	73,724	30,783	1,706
29,780	7,100	58,521	...	42,215	25,619	1,102
6,689	2,807	46,535	...	822	15,577	426
27,893	2,451	35,700	...	17,898	9,064	3,336
29,328	6,293	29,988	...	12,750	17,101	866
37,218	7,488	41,114	...	17,312	11,727	475
1,71,365	30,432	2,86,421	...	1,73,983	1,17,067	9,189
26,15,941	78,011	3,84,390	82,524	8,82,893	5,85,518	2,06,059
28,069	866	525	695	9,347	4,559	3,238
17,124	515	25,016	...	...	5,384	5,272
45,193	1,381	25,541	695	9,347	9,943	8,510

STATEMENT B.—Table showing Health Services in Rural and

District.		Rural Areas.									
		Medical Officers of Health				Public Health Inspectors.	Inspectors of Vaccination.	Vaccinators.		* Epidemic Staff.	School Medical Officers.
		Holding D.P.H.		Licentiates (L.P.H.).				Male.	Female.		
		Whole-time.	Part-time.	Whole-time.	Part-time.						
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Akyab	...	1	...	...	...	2	1	11	...	...	...
Arakan Hill Tracts	...	...	...	...	...	...	...	3	...	...	...
Kyaukpyu	...	...	...	...	...	1	...	6	...	...	...
Sandoway	...	...	...	...	...	1	...	3	...	...	...
Rangoon	...	...	...	...	...	...	...	...	...	...	...
Pegu	...	...	...	...	...	1	2	7	...	...	...
Tharrawaddy	...	...	...	...	...	2	1	10	...	...	...
Hanthawaddy	...	1	...	...	...	2	2	8	...	...	...
Insein	...	1	...	...	...	5	...	5	...	...	...
Prome	...	...	...	...	...	2	...	8	...	...	...
Bassein	...	...	...	...	...	4	1	11	...	...	...
Henzada	...	...	...	...	...	3	...	12	...	...	...
Myaungmya	...	1	...	...	...	3	1	11	...	...	...
Maubin	...	...	...	...	...	3	1	9	...	...	...
Pyapôn	...	1	...	...	...	3	1	8	...	...	...
Salween	...	...	...	...	...	1	...	4	...	...	...
Thatôn	...	...	...	...	...	2	1	12	...	...	...
Amherst	...	...	...	...	...	3	...	8	...	...	...
Tavoy	...	...	...	...	...	1	1	5	...	...	...
Mergui	...	...	...	...	...	2	...	6	...	...	...
Toungoo	...	...	...	...	...	1	1	10	...	...	...
Thayetmyo	...	...	...	...	...	2	...	7	...	...	...
Minbu	...	...	...	...	...	2	...	6	...	...	...
Magwe	...	...	...	...	...	3	...	7	...	...	...
Pakôkku	...	...	...	...	...	1	...	8	...	...	...
Chin Hills District	...	...	...	...	...	...	1	6	...	...	...
Mandalay	...	...	...	...	...	1	1	6	...	...	...
Kyauksè	...	...	...	...	...	1	1	4	...	...	...
Meiktila	...	...	...	...	...	3	...	4	...	...	...
Myingyan	...	...	...	...	...	2	...	10	...	...	...
Yamèthin	...	...	...	1	...	3	...	6	...	...	...
Bhamo	...	...	...	...	...	1	...	4	...	...	...
Myitkyina	...	...	...	...	...	1	...	3	...	...	...
Shwebo	...	...	...	...	...	3	...	10	...	...	...
Sagaing	...	...	...	...	...	2	...	6	...	...	...
Katha	...	...	...	...	...	2	1	6	...	...	...
Upper Chindwin	...	...	...	...	...	1	1	7	...	...	...
Lower Chindwin	...	...	...	...	...	2	...	7	...	...	...
Northern Shan States	...	...	...	...	...	3	...	21	...	...	...
Southern Shan States	...	...	...	...	...	1	† 3	22	...	...	...
Provincial	...	...	...	...	...	...	...	...	...	(a) 37	...
Total	...	5	...	1	...	76	21	307	...	(a) 37	...

* This column should not include officers already noted in columns 2—5 or 13—16 nor should it include peons coolies and menials such as sweepers, etc.

† Other health staffs should include food and water analysts, leprosy specialists or similar other important public health appointments but not menials, etc., e.g., sweepers, bhists, laboratory assistants, etc.

(a) 32 Epidemic Sub-Assistant Surgeons and 5 Assistant District Health Officers.

(b) 1 Special Leprosy Officer, 1 Sub-Assistant Surgeon attached to the Special Leprosy Officer, 2 Sub-Assistant Surgeons attached to the Bacteriological Department, 1 Sub-Assistant Surgeon attached to the Vaccine Depôt, Meiktila and 1 Sub-Assistant Surgeon attached to the Port Health Department at Akyab

Urban Areas of Burma during 1938.

Urban Areas.												
† Other Health Staffs. (12)	Medical Officers of Health				Medical Registrars. (17)	Public Health Inspectors. (18)	Inspectors of Vaccination. (19)	Vaccinators.		* Epidemic Staff. (22)	School Medical Officers. (23)	† Other Health Staffs. (24)
	Holding D.P.H.		Licentiates (L.P.H.).					Male. (20)	Female. (21)			
	Whole-time. (13)	Part-time. (14)	Whole-time. (15)	Part-time. (16)								
...	1	...	...	...	1	1	...	3	...	...	...	1
...
...	1	...	...	...	...	...	...
...	1	...	1	...	...	...	...
...	7	...	...	...	17	36	...	25	...	5	...	36
...	1	...	1	...	...	2	...	2	...	...	...	...
...	6	...	6	...	...	...	...
...	...	1	...	...	1	3	...	1	...	...	...	...
...	1	...	...	3	...	3	...	...	...	...
...	1	...	1	...	...	3	...	3	...	...	...	...
...	1	5	...	4	...	...	...	...
...	1	...	...	...	...	4	...	3	...	...	...	...
...	3	...	3	...	...	...	...
...	3	...	3	...	...	...	...
...	2	...	2	...	...	...	...
...
...	1	...	...	2	...	2	...	...	...	...
...	1	...	...	...	1	6	...	3	...	...	...	...
...	2	...	2	...	...	...	...
...	1	...	1	...	...	...	...
...	3	...	2	...	...	...	...
...	1	...	...	1	...	2	...	...	...	...
...	2	...	1	...	...	...	...
...	4	...	4	...	...	...	...
...	1	...	...	1	...	1	...	...	...	...
...
...	2	...	...	...	3	...	...	6	...	2	...	...
...	1	...	1	...	...	...	...
...	1	...	1	...	...	...	...
...	1	...	...	2	...	2	...	...	...	...
...	1	...	...	3	...	2	...	...	...	...
...	1	...	1	...	...	...	...
...	1	...	1	...	...	...	...
...	2	...	1	...	...	...	...
...	1	...	2	...	...	...	...
...
...	1	...	...	...	...	...	...
...	1	...	1	...	...	...	...
...	1	...	1	...	...	...	...
...	2	...	1	...	...	...	...
(b) 6
(b) 6	14	1	8	...	24	125	...	97	...	7	...	37

NOTE.—In addition to the above, the following personnel were employed :—3 whole-time Medical Officers of Health holding D.P.H., 7 Public Health Inspectors by the Burma Railways, Rangoon ; 1 whole-time Medical Officer of Health holding D.P.H., 3 Public Health Inspectors and 1 School Medical Officer by the Burma Corporation, Ltd., Nanttu ; 1 part-time Medical Officer of Health holding D.P.H. and 1 Public Health Inspector by the Port Commissioners, Rangoon, and 1 whole-time Medical Officer of Health holding D.P.H., 2 whole-time Medical Officers of Health holding L.P.H. and 1 Public Health Inspector by the Burma Oil Company, Ltd., Syriam.

STATEMENT C.—Table showing Maternity and Child Welfare Centres, Health Visitors and Trained Midwives in Rural and Urban Areas in Burma during 1938.

Maternity and Child Welfare.													
Districts.	Centres maintained by						Trained Visitors.		Trained Midwives.*		Trained Dais.		
	Government.		Local and Municipal Bodies.		Other Agencies.								
	(1)	Rural. (2)	Urban. (3)	Rural. (4)	Urban. (5)	Rural. (6)	Urban. (7)	Rural. (8)	Urban. (9)	Rural. (10)	Urban. (11)	Rural. (12)	Urban. (13)
Akyab	1	...	...	...	1	3	...	...
Arakan Hill Tracts...
Kyaukpyu	1	1	...	...
Sandoway	2	1	...	...
Rangoon	4	...	2	...	10	...	...	16	...	...
Pegu	1	...	...	10	4	...	...	...
Tharrawaddy	1	...	...	...	5	7	...	...
Hanthawaddy	2	...	...	...	6	3	...	...
Insein ...	2	...	...	...	...	...	1	...	...	9	4	...	...
Prome	1	...	1	...	3	5	...	...
Bassein	1	...	1	...	6	7	...	...
Henzada	1	...	1	...	9	5	...	...
Myaungmya	4	3	...	...
Maubin	5	3	...	...
Pyapôn	1	...	...	...	3	3	...	...
Salween
Thatôn	1	...	1	...	7	3	...	...
Amherst	2	...	1	...	12	5	...	...
Tavoy	3	2	...	...
Mergui	2	3	...	...
Toungoo	1	...	1	...	1	3	...	...
Thayetmyo	1	...	...	...	4	2	...	...
Minbu	1	...	...	...	1	2	...	...
Magwe	4	...	3	...	3	5	...	...
Pakôkku	1	...	...	...	2	1	...	...
Chin Hills
Mandalay	4	...	3	...	...	11	...	...
Kyauksè	1	...	...	...	4	1	...	...
Meiktila	1	...	1	...	3	1	...	...
Myingyan	1	2	...	...
Yamèthin ...	1	...	...	...	...	2	1	2	...	3	4	...	...
Bhamo	1	...	1	...	1	1	...	...
Myitkyina	1	...	...
Shwebo	1	...	1	...	3	3	...	...
Sagaing	1	...	...	...	10	2	...	...
Katha	3	...	...	...
Upper Chindwin
Lower Chindwin	1	...	1	...	5	1	...	...
Northern Shan States	1	...	...	11	1	...	...
Southern Shan States	1	...	1	...	25	2	...	...
Total ...	3	...	...	4	1	35	3	29	168	121	...	...

* Excludes Midwives employed on Child Welfare work alone.

Don. 9902

AC. 229



REPORT
ON THE
STATE OF PUBLIC HEALTH
IN BURMA
DURING 1938
VOLUME II (STATISTICS.)

RANGOON

SUPDT., GOVT. PRINTING AND STATIONERY, BURMA
1939

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ANNUAL STATEMENT NO. I.--Births registered in the

1	2	3			4		
No.	Divisions and Districts.	Population according to Census of 1931.			Number of births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
	ARAKAN DIVISION.						
1	Akyab	338,592	296,940	635,532	11,170	10,365	21,535
2	Kyaukpyu	107,729	112,563	220,292	3,402	3,249	6,651
3	Sandoway	64,206	65,039	129,245	1,922	1,820	3,742
	PEGU DIVISION.						
4	Rangoon	271,063	129,352	400,415	5,606	5,489	11,095
5	Pegu	253,960	235,851	489,811	7,409	7,003	14,412
6	Tharrawaddy	251,303	254,507	505,810	9,312	8,843	18,155
7	Hanthawaddy	218,919	189,912	408,831	6,765	6,185	12,950
8	Insein	175,519	155,933	331,452	5,223	4,891	10,114
9	Prome	203,171	207,480	410,651	6,617	6,391	13,008
	IRRAWADDY DIVISION.						
10	Bassein	292,029	279,014	571,043	10,585	10,120	20,705
11	Henzada	304,995	310,794	615,789	10,925	10,319	21,244
12	Myaungmya	235,655	209,129	444,784	7,446	7,075	14,521
13	Maubin	188,770	182,739	371,509	7,216	6,688	13,904
14	Pyapôn	179,554	154,604	334,158	5,724	5,775	11,499
	TENASSERIM DIVISION.						
15	Thatôn	274,942	257,686	532,628	7,977	7,614	15,591
16	Amherst	270,677	245,556	516,233	9,019	8,531	17,550
17	Tavoy	92,637	87,327	179,964	2,851	2,767	5,618
18	Mergui	85,263	76,724	161,987	2,708	2,643	5,351
19	Toungoo	220,010	208,818	428,828	6,278	6,041	12,319
	MAGWE DIVISION.						
20	Thayetmyo	135,565	138,612	274,177	5,425	5,494	10,919
21	Minbu	136,662	141,214	277,876	5,016	4,817	9,833
22	Magwe	250,783	248,790	499,573	9,375	9,278	18,653
23	Pakôkku	241,137	258,044	499,181	9,950	9,664	19,614
	MANDALAY DIVISION.						
24	Mandalay	191,741	179,895	371,636	7,456	6,671	14,127
25	Kyauksè	74,880	76,440	151,320	2,487	2,339	4,826
26	Meiktila	147,171	162,828	309,999	5,206	5,099	10,305
27	Myingyan	228,784	243,773	472,557	5,772	5,838	11,610
28	Yâmèthin	194,318	196,502	390,820	9,203	8,893	18,096
	SAGAING DIVISION.						
29	Shwebo	214,170	232,620	446,790	10,599	10,037	20,636
30	Sagaing	159,881	176,084	335,965	7,311	7,133	14,444
31	Lower Chindwin	178,543	204,891	383,434	7,913	7,662	15,575
	Total	6,182,629	5,919,661	12,102,290	213,868	204,734	418,602

Districts Burma during the year of 1938.

5			6	7	8	9			1
Ratio of births per 1,000 of population.			Number of males born to every hundred females.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.				Male.	Female.	Total.	
17.58	16.31	33.88	108	14	...	16.71	15.21	31.92	1
15.44	14.75	30.19	105	13	...	14.86	13.93	28.79	2
14.87	14.08	28.95	106	8	...	16.24	15.33	31.57	3
14.00	13.71	27.71	102	...	3	13.32	12.50	25.82	4
15.13	14.30	29.42	106	7	...	13.52	12.81	26.33	5
18.41	17.48	35.89	105	9	...	17.26	16.45	33.71	6
16.55	15.13	31.68	109	8	...	15.95	15.22	31.17	7
15.76	14.76	30.51	107	6	...	14.64	14.11	28.75	8
16.11	15.56	31.68	104	3	...	17.52	16.45	33.97	9
18.54	17.72	36.26	105	12	...	14.17	13.67	27.84	10
17.74	16.76	34.50	106	11	...	15.04	14.19	29.23	11
16.81	15.91	32.65	105	8	...	16.86	15.89	32.76	12
19.42	18.00	37.43	108	12	...	18.02	17.26	35.28	13
17.13	17.28	34.41	99	6	...	15.57	15.66	31.24	14
14.98	14.30	29.27	105	11	...	12.80	12.36	25.15	15
17.47	16.53	34.00	106	14	...	17.54	16.82	34.36	16
15.84	15.38	31.22	103	6	...	19.55	18.94	38.49	17
16.72	16.32	33.03	102	11	...	16.51	15.89	32.40	18
14.64	14.09	28.73	104	4	...	14.34	13.70	28.04	19
19.79	20.04	39.82	99	6	...	12.68	12.53	25.20	20
18.05	17.34	35.39	104	6	...	17.81	17.14	34.95	21
18.77	18.57	37.34	101	10	...	14.53	14.21	28.74	22
19.93	19.36	39.29	103	9	...	19.38	19.40	38.78	23
20.06	17.95	38.01	112	7	...	20.88	18.99	39.86	24
16.44	15.46	31.89	106	...	...	17.41	17.19	34.60	25
16.79	16.45	33.24	102	5	...	16.85	16.51	33.37	26
12.21	12.35	24.57	99	5	...	12.16	12.10	24.26	27
23.55	22.75	46.30	103	13	...	18.67	18.39	37.06	28
23.72	22.46	46.19	106	13	...	22.38	21.83	44.21	29
21.76	24.23	42.99	102	11	...	21.87	21.60	43.48	30
20.64	19.98	40.62	103	11	...	21.25	21.16	42.40	31
17.67	16.92	34.59	104	9	...	16.50	15.88	32.38	

ANNUAL STATEMENT NO. I (a).—Showing the Still-births registered

No.	Divisions and Districts.	Total number of births registered.	Still-			
			Christians.		Mohamedans.	
			Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ARAKAN DIVISION.						
1	Akyab	21,535	...	...	47	30
2	Kyaukpyu	6,651	...	1	...	1
3	Sandoway	3,742	...	...	3	...
PEGU DIVISION.						
4	Rangoon	11,095	31	17	57	43
5	Pegu	14,412	...	...	2	2
6	Tharrawaddy	18,155	...	...	1	1
7	Hanthawaddy	12,950	1	...	4	4
8	Insein	10,114	4	2	10	4
9	Prome	13,008	...	1	5	2
IRRAWADDY DIVISION.						
10	Bassein	20,705	6	4	9	9
11	Henzada	21,244	1	...	2	2
12	Myaungmya	14,521	8	4	10	5
13	Maubin	13,904	1	2	2	2
14	Pyapôn	11,499	26	16	7	6
TENASSERIM DIVISION.						
15	Thatôn	15,591	...	...	1	3
16	Amherst	17,550	4	1	34	19
17	Tavoy	5,618	...	1	...	...
18	Mergui	5,351	...	...	3	3
19	Toungoo	12,319	1	3	9	5
MAGWE DIVISION.						
20	Thayetmyo	10,919	1	...	3	3
21	Minbu	9,833	...	...	1	...
22	Magwe	18,653	...	...	1	2
23	Pakôkku	19,614	...	...	...	...
MANDALAY DIVISION.						
24	Mandalay	14,127	4	3	28	16
25	Kyauksè	4,826	...	1	8	8
26	Meiktila	10,305	...	1	2	3
27	Myingyan	11,610	...	...	3	...
28	Yamèthin	18,096	1	...	6	2
SAGAING DIVISION.						
29	Shwebo	20,636	...	2	1	1
30	Sagaing	14,444	2	...	1	1
31	Lower Chindwin	15,575	...	...	4	2
Total ...		418,602	91	59	264	179

according to Classes and Sex in the districts of Burma during the year 1938.

Births.										
Hindus.		Burmese or Buddhists.		Other classes.		Total.			Percentage (of still- births) to live births.	No
Male. (8)	Female. (9)	Male. (10)	Female. (11)	Male. (12)	Female. (13)	Male. (14)	Female. (15)	Total. (16)			(17)	(1)
2	2	52	51	4	2	105	85	190	0.88	1
...	...	26	28	1	1	27	31	58	0.87	2
1	...	5	2	...	...	9	2	11	0.29	3
98	79	163	141	8	11	357	291	648	5.84	4
5	3	38	23	1	1	46	29	75	0.52	5
4	5	76	46	...	1	81	53	134	0.74	6
13	14	29	27	2	...	49	45	94	0.73	7
15	11	60	38	5	2	94	57	151	1.49	8
7	6	35	30	2	2	49	41	90	0.69	9
12	6	171	134	...	1	198	154	352	1.70	10
5	10	120	90	1	1	129	103	232	1.09	11
8	11	58	40	7	6	91	66	157	1.08	12
1	1	29	20	1	...	34	25	59	0.42	13
10	2	74	107	8	16	125	147	272	2.37	14
2	...	18	18	...	1	21	22	43	0.28	15
16	14	86	74	1	1	141	109	250	1.42	16
1	...	12	14	1	1	14	16	30	0.53	17
4	3	39	23	...	2	46	31	77	1.44	18
12	8	35	32	4	...	61	48	109	0.88	19
2	2	63	55	2	4	71	64	135	1.24	20
...	1	32	32	1	...	34	33	67	0.68	21
2	...	53	40	...	...	56	42	98	0.53	22
...	2	78	55	1	1	79	58	137	0.70	23
27	37	199	163	...	2	258	221	479	3.39	24
1	1	71	51	1	...	81	61	142	2.94	25
1	...	5	11	...	1	8	16	24	0.23	26
2	4	45	34	1	...	51	38	89	0.77	27
7	6	94	86	1	...	109	94	203	1.12	28
1	1	38	21	1	1	41	26	67	0.32	29
4	...	41	35	...	...	48	36	84	0.58	30
...	1	36	35	...	1	40	39	79	0.51	31
263	230	1,881	1,556	54	59	2,553	2,083	4,636	1.11	

ANNUAL STATEMENT NO. II.—*Statement of Births and Deaths*

1	2	3	4	5			6		7		
No.	Divisions and Districts.	Area in square miles.	Average population per square mile.	Population (Census 1931).			Births.		Number of deaths registered.		
				Male.	Female.	Total.	Total number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.
	ARAKAN DIVISION.										
1	Akyab ...	4,581	138·73	338,592	296,940	635,532	21,535	33·88	6,690	6,179	12,869
2	Kyaukpyu ...	4,793	45·96	107,729	112,563	220,292	6,651	30·19	1,848	1,873	3,721
3	Sandoway ...	4,149	31·15	64,206	65,039	129,245	3,742	28·95	1,329	1,334	2,663
	PEGU DIVISION.										
4	Rangoon ...	85	4710·76	271,063	129,352	400,415	11,095	27·71	7,326	4,888	12,214
5	Pegu ...	4,114	119·06	253,960	235,851	489,811	14,412	29·42	6,248	4,824	11,072
6	Tharrawaddy ...	2,800	180·65	251,303	254,507	505,810	18,155	35·89	7,174	6,198	13,372
7	Hanthawaddy ...	1,917	213·27	218,919	189,912	408,831	12,950	31·68	5,226	4,266	9,492
8	Insein ...	1,903	174·17	175,519	155,933	331,452	10,114	30·51	4,487	3,615	8,102
9	Prome ...	2,948	139·30	203,171	207,480	410,651	13,008	31·68	6,336	5,620	11,956
	IRRAWADDY DIVISION.										
10	Bassein ...	4,149	137·63	292,029	279,014	571,043	20,705	36·26	7,308	6,300	13,608
11	Henzada ...	2,796	220·24	304,995	310,794	615,789	21,244	34·50	7,373	6,824	14,197
12	Myaungmya ...	2,835	156·89	235,655	209,129	444,784	14,521	32·65	6,201	4,623	10,824
13	Maubin ...	1,642	226·25	188,770	182,739	371,509	13,904	37·43	5,035	4,243	9,278
14	Pyapôn ...	2,145	155·78	179,554	154,604	334,158	11,499	34·41	5,061	4,293	9,354
	TENASSERIM DIVISION.										
15	Thatôn ...	4,872	109·32	274,942	257,686	532,628	15,591	29·27	5,012	4,525	9,537
16	Amherst ...	7,410	69·67	270,677	245,556	516,233	17,550	34·00	5,540	4,668	10,208
17	Tavoy ...	5,404	33·30	92,637	87,327	179,964	5,618	31·22	2,425	2,184	4,609
18	Mergui ...	11,325	14·30	85,263	76,724	161,987	5,351	33·03	1,924	1,658	3,582
19	Toungoo ...	6,457	66·41	220,010	208,818	428,828	12,319	28·73	5,646	4,834	10,480
	MAGWE DIVISION.										
20	Thayetmyo ...	4,626	59·27	135,565	138,612	274,177	10,919	39·82	4,731	4,499	9,230
21	Minbu ...	3,602	77·14	136,662	141,214	277,876	9,833	35·39	4,081	3,961	8,042
22	Magwe ...	3,724	134·15	250,783	248,790	499,573	18,653	37·34	6,807	6,626	13,433
23	Pakôkku ...	5,350	93·30	241,137	258,044	499,181	19,614	39·29	7,366	7,664	15,030
	MANDALAY DIVISION.										
24	Mandalay ...	2,113	175·88	191,741	179,895	371,636	14,127	38·01	6,057	5,619	11,676
25	Kyauksè ...	1,241	121·93	74,880	76,440	151,320	4,826	31·89	2,451	2,370	4,821
26	Meiktila ...	2,232	138·89	147,171	162,828	309,999	10,305	33·24	4,326	4,308	8,634
27	Myingyan ...	2,707	174·57	228,784	243,773	472,557	11,610	24·57	4,557	4,494	9,051
28	Yamèthin ...	4,201	93·03	194,318	196,502	390,820	18,096	46·30	6,827	6,298	13,125
	SAGAING DIVISION.										
29	Shwebo ...	5,735	77·91	214,170	232,620	446,790	20,636	46·19	7,527	7,488	15,015
30	Sagaing ...	1,870	179·66	159,881	176,084	335,965	14,444	42·99	5,317	5,527	10,844
31	Lower Chindwin ...	3,676	104·31	178,543	204,891	383,434	15,575	40·62	5,539	5,822	11,361
	Total ...	117,402	103·08	6,182,629	5,919,661	12,102,290	418,602	34·59	163,775	147,625	311,400

registered in the Districts of Burma during the year 1938.

8	9											10			1
Number of deaths of males to every hundred deaths of females.	Deaths per 1,000 of population from											Mean ratio of deaths per 1,000 during previous five years.			No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.	
									Male.	Female.	Total.				
108	0'00	0'10	...	12'98	0'90	0'90	0'29	5'09	19'76	20'81	20'25	18'94	19'21	19'06	1
99	...	0'00	0'00	7'56	0'64	0'53	0'22	7'93	17'15	16'64	16'89	16'60	16'13	16'36	2
100	...	...	...	11'55	0'09	0'19	0'36	8'42	20'70	20'51	20'60	22'88	23'05	22'97	3
150	0'02	0'20	0'03	0'73	1'80	9'17	0'84	17'72	27'03	37'79	30'50	21'97	30'66	24'78	4
130	0'13	0'02	0'08	6'45	0'17	0'50	0'35	14'91	24'60	20'45	22'60	18'35	16'40	17'41	5
116	0'00	0'00	0'16	10'18	0'43	0'69	0'92	14'05	28'55	24'35	26'44	21'98	19'31	20'64	6
123	0'03	0'05	0'00	5'27	0'15	0'46	0'38	16'87	23'87	22'46	23'22	19'27	19'16	19'22	7
124	0'04	0'02	0'11	8'58	0'34	0'72	0'68	13'96	25'56	23'18	24'44	20'01	18'97	19'52	8
113	0'00	...	0'07	13'22	0'44	1'01	0'49	13'89	31'19	27'09	29'11	26'46	24'04	25'24	9
116	0'02	0'00	0'08	6'35	0'67	1'01	0'22	15'48	25'02	22'58	23'83	17'95	16'35	17'16	10
108	...	0'01	0'00	10'06	0'57	0'48	0'42	11'52	24'17	21'96	23'05	18'61	17'40	18'00	11
134	0'04	0'01	0'02	6'90	0'43	0'50	0'40	16'04	26'31	22'11	24'34	22'32	21'26	21'82	12
119	0'01	0'03	0'07	12'46	0'22	0'58	0'51	11'10	26'67	23'22	24'97	21'82	20'11	20'98	13
118	0'01	0'03	...	7'65	1'04	0'85	0'67	17'75	28'19	27'77	27'99	25'11	25'70	25'39	14
111	0'01	0'00	0'07	10'38	0'17	0'29	0'22	6'76	18'23	17'56	17'91	16'08	15'25	15'68	15
119	0'01	0'00	...	4'22	0'46	1'32	0'40	13'37	20'47	19'01	19'77	18'96	18'08	18'54	16
111	0'01	0'02	...	16'29	0'96	0'92	0'33	7'08	26'18	25'01	25'61	26'32	24'93	25'65	17
116	...	...	...	11'43	0'54	1'59	0'75	7'80	22'57	21'61	22'11	23'32	22'24	22'81	18
117	0'92	0'00	0'09	8'96	0'59	0'58	0'40	12'89	25'66	23'15	24'44	20'41	18'64	19'55	19
105	...	...	0'02	18'46	0'50	0'80	0'27	13'62	34'90	32'46	33'66	19'27	17'98	18'62	20
103	0'00	...	0'36	15'83	0'41	0'84	0'62	10'88	29'86	28'05	28'94	27'43	25'78	26'59	21
103	0'01	0'01	0'45	13'50	0'15	0'60	0'69	11'48	27'14	26'63	26'89	19'28	18'44	18'86	22
96	...	0'00	1'05	13'23	0'48	0'60	0'46	14'28	30'55	29'70	30'11	25'28	24'00	24'62	23
108	...	...	2'35	8'30	1'14	4'49	0'37	14'78	31'59	31'23	31'42	30'13	28'75	29'47	24
103	0'01	...	0'06	15'40	0'97	0'86	0'53	14'04	32'73	31'00	31'86	26'44	24'23	25'32	25
100	...	...	4'66	6'59	0'37	0'32	0'59	15'33	29'39	26'46	27'85	21'49	18'90	20'13	26
101	0'02	0'06	0'98	2'92	0'32	0'88	0'54	13'42	19'92	18'44	19'15	15'87	14'58	15'20	27
108	0'05	...	0'38	11'20	0'37	0'94	0'45	20'19	35'13	32'05	33'58	23'80	21'99	22'89	28
101	...	...	0'09	17'08	0'35	0'17	0'63	15'25	35'14	32'19	33'61	32'54	28'86	30'62	29
96	0'02	...	0'98	12'43	0'51	0'51	0'71	17'10	33'26	31'39	32'28	27'45	24'21	25'75	30
95	...	...	0'05	12'67	0'56	3'63	0'56	12'16	31'02	28'42	29'63	27'78	24'55	26'06	31
111	0'05	0'02	0'38	9'88	0'53	1'18	0'48	13'21	26'49	24'94	25'73	21'83	20'69	21'27	

SUPPLEMENTARY ANNUAL STATEMENT II (a)—PROVINCIAL—*Showing*
(I—XII) *for the*

1	2	3	4		
Areas.	Area in square miles.	Average population per square mile.	Population according to Census of 1931.		
			Male.	Female.	Total.
Pyinwa Circle of Akyab District	671	3·05	1,051	997	2,048
Arakan Hill Tracts ...	3,228	6·64	11,031	10,387	21,418
* Salween District ...	2,577	20·64	27,990	25,196	53,186
Papun Town ...	...	...	1,236	645	1,881
Chin Hills District ...	10,675	16·04	83,453	87,784	171,237
* Bhamo District ...	4,154	29·18	59,984	61,209	121,193
Bhamo Town ...	...	...	4,846	3,165	8,011
* Myitkyina District ...	30,882	5·55	90,916	80,608	171,524
Myitkyina Town ...	...	...	4,637	2,691	7,328
* Katha District ...	7,593	33·47	126,863	127,307	254,170
Katha Town ...	...	...	2,364	1,869	4,233
* Upper Chindwin District ...	19,001	10·25	99,183	95,659	194,842
Mawlaik Town ...	...	...	1,370	908	2,278
* Northern Shan States ...	24,650	25·81	331,136	304,971	636,107
Lashio Town ...	...	...	2,782	1,856	4,638
* Southern Shan States ...	40,914	22·71	471,234	457,757	928,991
Taunggyi Town ...	...	...	4,671	3,981	8,652
Kalaw Town ...	...	...	2,025	1,596	3,621
Total ...	144,345	17·70	1,302,841	1,251,875	2,554,716

* Includes

*Births and Deaths in Areas not included in the main statements
year 1938.*

5			6	7			8	Remarks.
Number of births registered.			Birth-rate per 1,000 of population.	Number of deaths registered			Death-rate per 1,000 of population.	
Male.	Female.	Total.		Male.	Female.	Total.		
...	...	...	...	3	6	9	4.39	
223	192	415	19.38	228	157	385	17.98	
336	327	663	12.47	390	322	712	13.39	
18	21	39	20.73	34	18	52	27.64	
3,314	3,147	6,461	37.73	2,817	2,593	5,410	31.59	
1,789	1,964	3,753	30.97	1,711	1,654	3,365	27.77	
118	135	253	31.58	156	108	264	32.95	
2,416	2,375	4,791	27.93	2,295	1,871	4,166	24.29	
162	155	317	43.26	229	91	320	43.67	
4,406	4,175	8,581	33.76	3,011	2,758	5,769	22.70	
82	101	183	43.23	124	97	221	52.21	
4,420	4,554	8,974	46.06	3,803	3,558	7,361	37.78	
57	62	119	52.24	73	32	105	46.09	
6,409	5,996	12,405	19.50	5,108	4,380	9,488	14.92	
120	134	254	54.76	169	75	244	52.61	
4,722	4,570	9,292	10.00	5,306	5,235	10,541	11.35	
206	210	416	48.08	221	177	398	46.00	
82	58	140	38.66	64	45	109	30.10	
28,880	28,176	57,056	22.33	25,742	23,177	48,919	19.15	

Town.

ANNUAL STATEMENT NO. IIIA.—Deaths registered in the

1	2						
No.	Divisions and Districts.		January.	February.	March.	April.	May.
	ARAKAN DIVISION.						
1	Akyab	...	967	731	717	862	875
2	Kyaukpyu	...	306	248	242	188	239
3	Sandoway	...	180	183	155	176	168
	PEGU DIVISION.						
4	Pegu	...	787	667	703	533	673
5	Tharrawaddy	...	1,013	839	928	765	612
6	Hanthawaddy	...	619	533	745	447	517
7	Insein	...	578	602	553	468	419
8	Prome	...	630	673	809	465	567
	IRRAWADDY DIVISION.						
9	Bassein	...	783	605	556	950	795
10	Henzada	...	979	915	898	730	711
11	Myaungmya	...	743	512	478	586	560
12	Maubin	...	781	524	496	486	433
13	Pyapôn	...	853	622	726	737	672
	TENASSERIM DIVISION.						
14	Thatôn	...	713	497	430	694	478
15	Amherst	...	639	556	657	378	497
16	Tavoy	...	427	303	398	202	198
17	Mergui	...	148	123	154	128	82
18	Toungoo	...	693	558	600	451	558
	MAGWE DIVISION.						
19	Thayetmyo	...	737	740	678	663	682
20	Minbu	...	723	430	419	431	382
21	Magwe	...	1,009	851	950	834	710
22	Pakôkku	...	1,204	989	884	880	814
	MANDALAY DIVISION.						
23	Mandalay	...	289	255	321	235	237
24	Kyauksè	...	568	275	298	262	264
25	Meiktila	...	944	570	407	724	355
26	Myingyan	...	419	522	461	503	510
27	Yamèthin	...	1,177	783	970	828	634
	SAGAING DIVISION.						
28	Shwebo	...	1,212	907	843	870	712
29	Sagaing	...	1,032	796	753	614	581
30	Lower Chindwin	...	931	702	715	644	657
	Total for Rural Districts		22,084	17,511	17,944	16,734	15,592
	Ratio of deaths per 1,000		24·32	21·35	19·76	19·05	17·17

Rural Districts of Burma during each month of the year 1938.

3							4	1
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
956	1,407	1,281	1,142	996	1,008	1,030	11,972	1
312	458	433	334	337	280	295	3,672	2
203	290	262	228	208	224	298	2,575	3
906	790	846	1,003	957	894	1,007	9,766	4
908	1,231	1,074	921	1,279	1,063	1,091	11,724	5
873	486	470	1,000	1,042	1,029	1,017	8,778	6
443	625	534	479	537	586	490	6,314	7
718	833	931	948	764	848	1,487	9,673	8
956	1,226	1,106	1,109	1,479	1,163	963	11,691	9
1,013	1,377	1,390	1,109	1,216	1,220	1,202	12,760	10
583	950	846	811	1,571	1,228	1,016	9,884	11
478	676	677	743	1,108	1,114	921	8,437	12
711	641	694	702	702	699	800	8,559	13
489	1,442	861	750	1,004	632	626	8,616	14
738	660	681	844	625	500	973	7,748	15
231	341	315	258	288	260	281	3,502	16
456	234	166	317	260	230	405	2,703	17
719	874	914	1,085	1,120	967	637	9,176	18
630	789	723	716	603	660	777	8,398	19
556	733	699	628	782	836	958	7,577	20
838	1,572	1,077	827	961	1,003	1,206	11,838	21
1,015	1,259	1,434	1,176	1,445	1,420	1,260	13,780	22
274	416	369	428	453	440	448	4,165	23
200	344	339	272	421	556	660	4,459	24
469	904	615	517	1,078	676	929	8,188	25
481	648	684	542	876	984	799	7,429	26
903	1,340	1,094	854	1,083	1,069	1,127	11,862	27
925	1,373	1,465	1,367	1,452	1,781	1,617	14,524	28
810	906	921	836	886	1,011	1,012	10,158	29
877	1,067	1,011	937	1,039	1,203	1,183	10,966	30
19,671	25,892	23,912	22,883	26,572	25,584	26,515	260,894	
22.39	28.52	26.34	26.04	29.27	29.12	29.21	24.41	

ANNUAL STATEMENT NO. III B.—*Deaths registered in the Towns*

1	2						
No.	Divisions and Towns.		January.	February.	March.	April.	May.
ARAKAN DIVISION.							
1	Akyab	...	97	90	77	72	75
2	Minbya	...	2	2	5	2	5
3	Kyaukpyu	...	2	...	9	2	4
4	Sandoway	...	8	7	3	6	7
PEGU DIVISION.							
5	Rangoon Town	...	980	873	954	902	925
6	Rangoon Cantonment	...	1	...	...	...	1
7	Pegu	...	68	85	76	70	66
8	Nyaunglebin	...	22	27	30	26	20
9	Tharrawaddy	...	17	14	15	8	14
10	Thônzè	...	23	26	27	17	21
11	Zigôn	...	22	23	18	14	14
12	Letpadan	...	29	22	27	20	24
13	Gyobingauk	...	40	60	36	12	12
14	Minhla	...	16	15	14	10	8
15	Nattalin	...	9	12	3	10	10
16	Syriam	...	45	40	27	24	29
17	Thôngwa	...	33	24	25	28	25
18	Insein	...	39	63	48	55	39
19	Mingaladon Cantonment	...	5	6	5	3	4
20	Thamaing	...	25	22	21	14	22
21	Kamayut	...	31	20	11	17	25
22	Thingangyun	...	17	13	22	16	18
23	Kanbe	...	21	13	13	12	14
24	Prome	...	100	77	99	81	68
25	Shwedaung	...	32	19	26	18	14
26	Paungdè	..	53	45	36	29	29
IRRAWADDY DIVISION.							
27	Bassein	...	121	122	110	90	117
28	Ngathainggyaung	...	3	11	19	17	14
29	Kyônpyaw	...	9	10	9	8	7
30	Henzada	...	72	60	50	53	47
31	Myanaung	...	31	11	28	15	23
32	Kyangin	...	20	12	8	10	11
33	Myaungmya	...	34	20	17	20	26
34	Wakèma	...	36	22	23	24	21
35	Moulmeingyun	...	28	29	34	26	15
36	Maubin	...	38	16	38	19	20
37	Yandoon	...	20	24	22	29	17
38	Danubyu	...	24	21	22	17	14
39	Pyapôn	...	34	32	28	27	28
40	Kyaiklat	...	36	38	38	36	42
TENASSERIM DIVISION.							
41	Thatôn	...	53	41	62	51	50
42	Kyaikto	...	18	16	25	17	11
43	Moulmein	...	185	203	193	152	174
44	Kawkareik	...	16	27	21	16	13
45	Tavoy	...	103	87	74	86	80

of Burma during each month of the year 1938.

3							4	1
June.	July.	August.	September.	October.	November	December.	Total deaths registered during the year.	No.
61	93	81	51	49	54	56	856	1
2	4	1	5	4	4	5	41	2
5	9	2	2	6	2	6	49	3
9	7	9	9	4	9	10	88	4
1,049	1,087	1,004	1,043	1,170	1,099	1,118	12,204	5
...	...	1	1	2	...	4	10	6
81	110	77	82	89	85	74	963	7
19	26	25	31	34	45	38	343	8
18	16	19	17	26	19	16	199	9
20	27	18	24	41	23	21	288	10
17	24	24	22	20	19	18	235	11
27	47	33	31	25	26	36	347	12
32	28	20	17	20	24	24	325	13
10	8	18	7	11	12	13	142	14
18	10	10	8	3	8	11	112	15
26	31	24	28	41	35	52	402	16
16	24	26	30	23	32	26	312	17
53	70	73	67	86	71	67	731	18
10	7	3	7	9	9	8	76	19
27	18	24	15	27	26	26	267	20
20	21	32	23	22	27	28	277	21
27	17	18	16	26	21	22	233	22
19	14	18	18	24	17	21	204	23
103	121	148	126	155	170	146	1,394	24
22	41	34	32	33	62	91	424	25
28	41	49	38	43	39	35	465	26
114	153	134	147	174	167	143	1,592	27
20	25	17	15	11	12	19	183	28
14	14	20	11	17	10	13	142	29
54	93	104	96	89	107	106	931	30
18	30	40	26	31	33	21	307	31
20	23	22	16	17	27	13	199	32
22	26	30	18	23	32	26	294	33
16	27	18	28	23	40	33	311	34
24	31	28	34	30	38	18	335	35
20	25	22	25	26	28	34	311	36
30	25	23	32	28	36	35	321	37
15	12	14	16	14	21	19	209	38
28	29	25	27	36	32	35	361	39
42	32	28	34	36	31	41	434	40
55	61	56	56	79	52	72	688	41
23	20	20	21	21	23	18	233	42
181	166	189	185	198	220	207	2,253	43
10	12	14	14	25	15	24	207	44
101	121	94	84	103	87	87	1,107	45

ANNUAL STATEMENT NO. IIIB.—Deaths registered in the Towns of

1	2							
No.	Divisions and Towns.			January.	February.	March.	April.	May.
TENASSERIM DIVISION—concl'd.								
46	Mergui	...	...	72	61	63	61	71
47	Toungoo	...	...	43	66	64	36	39
48	Shwegyin	...	...	13	12	15	17	7
49	Pyu	...	...	37	20	26	17	32
MAGWE DIVISION.								
50	Thayetmyo	...	...	22	27	22	32	27
51	Allanmyo	...	...	31	21	23	27	19
52	Minbu	...	...	17	19	23	15	12
53	Salin	...	...	18	13	21	19	8
54	Magwe	...	...	45	41	35	22	13
55	Taungdwingyi	...	...	41	27	37	37	31
56	Yenangyaung	...	...	43	47	39	36	23
57	Chauk	...	...	30	47	32	22	20
58	Pakôkku	...	...	246	227	127	73	51
MANDALAY DIVISION.								
59	Mandalay	...	...	751	807	706	372	365
60	Mandalay Cantonment	...	...	38	26	35	25	24
61	Maymyo	...	...	42	14	46	34	44
62	Maymyo Cantonment	...	...	4	2	3	1	3
63	Myitngè	...	...	16	15	8	4	12
64	Kyauksè	...	...	37	42	29	33	21
65	Meiktila	...	...	36	21	33	22	23
66	Myingyan	...	...	83	114	192	103	75
67	Nyaung-u	...	...	49	67	24	32	16
68	Yamèthin	...	...	33	15	23	20	16
69	Pyinmana	...	...	58	57	57	38	45
70	Pyawbwè	...	...	21	14	20	19	22
SAGAING DIVISION.								
71	Shwebo	...	...	32	28	28	29	35
72	Ye-u	...	...	7	5	9	5	1
73	Sagaing	...	...	41	27	42	33	30
74	Myinmu	...	...	19	27	21	15	7
75	Mônýwa	...	...	44	30	46	32	21
Total for Towns				4,587	4,339	4,297	3,412	3,336
Ratio per mille for Towns				38·23	40·04	35·82	29·39	27·81
Total for Burma				26,671	21,850	22,241	20,146	18,928
* Ratio per mille for Burma				25·95	23·54	21·64	20·25	18·41
TOWNS FOR WHICH CORRESPONDING RURAL FIGURES ARE NOT GIVEN IN VIA.								
1	Bhamo	...	...	23	13	16	30	17
2	Myitkyina	...	...	31	12	17	26	21
3	Mawlaik	...	...	11	8	13	8	5
4	Lashio	...	...	18	19	9	10	8
5	Taunggyi	...	...	32	16	28	36	32
6	Kalaw	...	...	4	7	5	4	6

* The ratios should be calculated with

Burma during each month of the year 1938—concl'd.

3							4	1
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
62	56	69	78	104	92	90	879	46
53	80	117	89	48	59	52	746	47
16	28	28	19	21	17	21	214	48
32	35	28	30	34	22	31	344	49
28	41	37	45	48	39	31	399	50
31	27	45	48	48	39	74	433	51
15	20	12	14	18	17	15	197	52
15	30	18	22	23	35	46	268	53
18	26	19	19	25	19	28	310	54
37	58	60	44	44	37	40	493	55
31	41	35	23	37	54	40	449	56
21	22	28	20	31	33	37	343	57
82	78	86	58	66	68	88	1,250	58
518	533	460	390	461	548	525	6,436	59
26	24	29	33	27	32	49	368	60
46	58	52	58	51	49	51	545	61
4	8	9	2	5	6	8	55	62
6	8	10	9	5	8	6	107	63
25	26	29	25	29	30	36	362	64
33	36	67	72	42	33	28	446	65
92	105	98	96	98	79	118	1,253	66
19	25	21	29	30	25	32	369	67
32	21	17	12	40	20	15	264	68
45	74	52	57	57	63	62	665	69
21	24	15	22	38	41	77	334	70
34	45	44	34	24	43	39	415	71
4	10	10	7	7	10	1	76	72
57	57	37	33	38	48	38	481	73
22	24	25	15	9	13	8	205	74
30	39	37	34	25	29	28	395	75
3,981	4,485	4,283	4,072	4,507	4,557	4,650	50,506	
34.29	37.38	35.70	35.07	37.57	39.25	38.76	35.75	
23,652	30,377	28,195	26,955	31,079	30,141	31,165	311,400	
23.78	29.55	27.43	27.10	30.24	30.30	30.32	25.73	
16	24	21	19	31	30	24	264	1
26	31	20	28	42	33	33	320	2
12	11	3	11	10	7	6	105	3
17	19	23	28	29	38	26	244	4
38	31	40	45	30	44	26	398	5
8	9	10	14	22	12	8	109	6

reference to the number of days in each month.

ANNUAL STATEMENT NO. IV.—Deaths registered according to Age

1	2	3		4		5		6		7	
No.	Divisions and Districts.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.	
		Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females.
	ARAKAN DIVISION.										
1	Akyab ...	1,805	1,529	958	1,069	462	455	195	172	247	262
2	Kyaukpyu ...	550	552	194	209	126	143	50	48	51	70
3	Sandoway ...	495	405	110	131	81	103	34	53	54	54
	PEGU DIVISION.										
4	Rangoon ...	1,699	1,536	471	482	124	125	84	63	157	163
5	Pegu ...	2,165	1,714	451	455	186	161	134	93	232	164
6	Tharrawaddy ...	2,744	2,353	517	555	259	330	181	146	299	204
7	Hanthawaddy ...	1,512	1,237	379	396	164	164	81	102	181	130
8	Insein ...	1,113	908	374	396	146	171	107	66	192	138
9	Prome ...	1,884	1,587	445	506	308	315	244	215	388	286
	IRRAWADDY DIVISION.										
10	Bassein ...	2,481	2,059	637	689	288	260	163	162	235	187
11	Henzada ...	2,454	2,066	717	754	281	323	151	145	252	174
12	Myaungmya ...	2,090	1,591	496	441	196	206	109	92	226	166
13	Maubin ...	1,927	1,601	368	417	131	138	112	84	191	135
14	Pyapôn ...	1,425	1,096	315	361	145	155	85	72	189	135
	TENASSERIM DIVISION.										
15	Thatôn ...	1,252	1,048	752	710	233	234	119	113	126	135
16	Amherst ...	1,229	1,061	664	695	295	295	157	136	200	139
17	Tavoy ...	469	417	332	349	138	211	73	72	93	73
18	Mergui ...	367	319	202	219	152	160	109	89	95	98
19	Toungoo ...	1,770	1,566	458	536	214	248	160	137	248	193
	MAGWE DIVISION.										
20	Thayetmyo ...	1,000	956	413	400	363	348	356	343	355	374
21	Minbu ...	1,233	1,047	562	504	203	238	108	96	141	111
22	Magwe ...	2,079	1,780	1,067	1,048	323	297	188	154	257	119
23	Pakôkku ...	2,172	1,901	1,279	1,325	358	414	210	214	229	222
	MANDALAY DIVISION.										
24	Mandalay ...	1,698	1,465	554	649	272	271	184	184	271	231
25	Kyauksè ...	794	726	223	222	128	151	101	101	121	89
26	Meiktila ...	1,171	1,035	520	548	191	210	151	192	209	164
27	Myingyan ...	1,186	960	592	647	248	246	165	158	164	173
28	Yamèthin ...	2,601	2,347	842	834	337	371	211	210	209	170
	SAGAING DIVISION.										
29	Shwebo ...	3,239	2,812	841	896	267	328	127	144	254	189
30	Sagaing ...	1,899	1,689	655	704	232	255	113	129	152	150
31	Lower Chindwin ...	1,797	1,507	793	834	285	318	149	123	200	190
	Total, Deaths ...	50,300	42,870	17,181	17,981	7,136	7,644	4,411	4,108	6,198	5,168
	Total, Population	156,129	165,140	655,253	680,262	754,499	742,497	705,048	679,505	574,397	593,405
	Total, Ratio per 1,000 living.	322.17	259.60	26.22	26.43	9.46	10.29	6.26	6.05	10.79	8.71

and Sexes in the Districts of Burma during the year 1938.

8		9		10		11		12		13		1
20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		Total (all ages)		No.
Males	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
506	676	548	522	532	329	514	346	923	819	6,690	6,179	1
78	144	107	131	140	85	152	100	400	391	1,848	1,873	2
66	107	79	92	94	64	89	96	247	229	1,329	1,334	3
846	591	1,183	538	982	372	747	323	1,033	695	7,326	4,888	4
538	451	564	475	555	313	469	282	954	716	6,248	4,824	5
612	505	630	472	520	332	444	385	968	916	7,174	6,198	6
416	414	473	385	438	295	433	301	1,149	842	5,226	4,266	7
412	316	532	399	438	271	341	264	832	686	4,487	3,615	8
636	557	733	605	528	490	469	407	701	652	6,336	5,620	9
512	481	659	562	632	479	537	398	1,164	1,023	7,308	6,300	10
506	524	568	566	593	500	500	500	1,351	1,272	7,373	6,824	11
621	436	586	450	507	290	406	264	964	687	6,201	4,623	12
368	370	398	386	358	220	332	199	850	693	5,035	4,243	13
379	391	531	508	665	561	584	476	743	538	5,061	4,293	14
331	403	451	445	437	367	400	343	911	727	5,012	4,525	15
468	472	526	426	484	325	389	262	1,128	857	5,540	4,668	16
257	195	258	185	223	157	199	189	383	336	2,425	2,184	17
171	163	205	179	228	131	174	113	221	187	1,924	1,658	18
495	492	626	480	509	323	402	254	764	605	5,646	4,834	19
449	435	455	417	440	376	393	361	507	489	4,731	4,499	20
262	353	315	353	305	261	301	250	651	748	4,081	3,961	21
405	543	503	541	438	341	366	374	1,181	1,349	6,807	6,626	22
403	570	529	587	457	460	483	472	1,246	1,499	7,366	7,664	23
565	476	623	505	568	469	450	380	872	989	6,057	5,619	24
159	175	216	201	192	163	191	166	326	376	2,451	2,370	25
392	415	407	394	290	254	218	220	777	876	4,326	4,308	26
356	366	347	328	289	257	286	285	924	1,074	4,557	4,494	27
450	396	454	437	379	307	382	285	962	941	6,817	6,298	28
438	502	470	500	380	365	354	319	1,157	1,433	7,527	7,488	29
311	410	357	395	383	331	281	290	934	1,174	5,317	5,527	30
327	419	342	418	332	324	326	331	988	1,358	5,539	5,822	31
12,735	12,748	14,675	12,882	13,316	9,812	11,612	9,235	26,211	25,177	163,775	147,625	
1,138,501	1,089,344	904,240	760,641	593,857	528,782	387,136	372,161	313,569	307,924	6,182,629	5,919,661	
11.19	11.70	16.23	16.94	22.42	18.56	29.99	24.81	83.59	81.76	26.49	24.94	

SUPPLEMENTARY ANNUAL STATEMENT NO. IV *giving the details of Deaths by*

No.	Divisions and Districts.	Not exceeding one month.						
		Male.			Female.			Total of columns 5 and 8.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ARAKAN DIVISION.								
1	Akyab	176	147	323	138	132	270	593
2	Kyaukpyu	42	40	82	41	42	83	165
3	Sandoway	55	27	82	31	44	75	157
PEGU DIVISION.								
4	Rangoon	350	153	503	262	153	415	918
5	Pegu	172	150	322	115	133	248	570
6	Tharrawaddy	201	184	385	160	162	322	707
7	Hanthawaddy	166	172	338	107	131	238	576
8	Insein	138	99	237	106	74	180	417
9	Prome	117	91	208	94	71	165	373
IRRAWADDY DIVISION.								
10	Bassein	306	257	563	227	207	434	997
11	Henzada	298	245	543	201	213	414	957
12	Myaungmya	242	147	389	167	101	268	657
13	Maubin	237	198	435	161	149	310	745
14	Pyapôn	183	118	301	103	89	192	493
TENASSERIM DIVISION.								
15	Thatôn	114	102	216	91	97	188	404
16	Amherst	148	112	260	107	161	208	468
17	Tavoy	48	55	103	30	61	91	194
18	Mergui	54	50	104	48	55	103	207
19	Toungoo	115	172	287	82	126	208	495
MAGWE DIVISION.								
20	Thayetmyo	118	112	230	117	117	234	464
21	Minbu	139	150	289	96	123	219	508
22	Magwe	356	229	585	262	207	469	1,054
23	Pakôkku	400	283	683	327	243	570	1,253
MANDALAY DIVISION.								
24	Mandalay	397	166	563	332	184	516	1,079
25	Kyauksè	120	137	257	118	108	226	483
26	Meiktila	113	73	186	88	81	169	355
27	Myingyan	188	131	319	117	99	216	535
28	Yamèthin	232	252	484	159	232	391	875
SAGAING DIVISION.								
29	Shwebo	410	443	853	319	405	724	1,577
30	Sagaing	283	229	512	233	179	412	924
31	Lower Chindwin	298	193	491	240	166	406	897
Total ...		6,216	4,917	11,133	4,679	4,285	8,964	20,097
Ratio per mille of births for last 3 columns only.		...	...	...	...	...	...	...

Ages and Sexes under one year in the Districts of Burma during the year 1938.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male, columns 5, 10 and 13.	Total female, columns 8, 11 and 14.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
(10)	(11)	(12)	(13)	(14)	(15)				(1)
1,098	912	2,010	384	347	731	1,805	1,529	3,334	1
387	364	751	81	105	186	550	552	1,102	2
356	277	633	57	53	110	495	405	900	3
959	864	1,823	237	257	494	1,699	1,536	3,235	4
1,590	1,249	2,839	253	217	470	2,165	1,714	3,879	5
1,942	1,652	3,594	417	379	796	2,744	2,353	5,097	6
1,005	855	1,860	169	144	313	1,512	1,237	2,749	7
715	568	1,283	161	160	321	1,113	908	2,021	8
1,415	1,183	2,598	261	239	500	1,884	1,587	3,471	9
1,577	1,302	2,879	341	323	664	2,481	2,059	4,540	10
1,625	1,356	2,981	286	296	582	2,454	2,066	4,520	11
1,473	1,116	2,589	228	207	435	2,090	1,591	3,681	12
1,187	1,008	2,195	305	283	588	1,927	1,601	3,528	13
973	761	1,734	151	143	294	1,425	1,096	2,521	14
851	690	1,541	185	170	355	1,252	1,048	2,300	15
741	634	1,375	228	219	447	1,229	1,061	2,290	16
278	268	546	88	58	146	469	417	886	17
187	149	336	76	67	143	367	319	686	18
1,207	1,110	2,317	276	248	524	1,770	1,566	3,336	19
479	435	914	291	287	578	1,000	956	1,956	20
740	626	1,366	204	202	406	1,233	1,047	2,280	21
1,212	1,044	2,256	282	267	549	2,079	1,780	3,859	22
1,029	856	1,885	460	475	935	2,172	1,901	4,073	23
889	697	1,586	246	252	498	1,698	1,465	3,163	24
349	323	672	188	177	365	794	726	1,520	25
771	660	1,431	214	206	420	1,171	1,035	2,206	26
656	531	1,187	211	213	424	1,186	960	2,146	27
1,730	1,565	3,295	387	391	778	2,601	2,347	4,948	28
1,890	1,649	3,539	496	439	935	3,239	2,812	6,051	29
1,058	949	2,007	329	328	657	1,899	1,689	3,588	30
1,066	858	1,924	240	243	483	1,797	1,507	3,304	31
31,435	26,511	57,946	7,732	7,395	15,127	50,300	42,870	93,170	
...	...	...	...	...	...	235·19	209·39	222·57	

ANNUAL STATEMENT No. IV-A.—Deaths registered according to Ages and Sexes in

1	2	3		4		5		6		7	
No.	Divisions and Towns.	Under 1 year.		1 year and under 5.		5 and under 10.		10 and under 15.		15 and under 20.	
		Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females
	ARAKAN DIVISION.										
1	Akyab ...	108	88	30	20	10	9	3	2	18	17
	PEGU DIVISION.										
2	Rangoon ...	1,698	1,534	471	482	124	125	84	63	157	163
3	Rangoon Cantonment	1	2	...	...	...	...	...	...	...	...
4	Pegu ...	141	112	36	49	19	10	9	6	9	9
5	Letpadan ...	51	34	9	11	1	8	5	1	10	5
6	Syriam ...	55	46	11	13	9	7	2	3	9	4
7	Insein ...	107	74	34	41	9	9	8	5	15	20
8	Prome ...	228	220	63	54	23	21	7	15	38	28
9	Paungdè ...	41	38	14	17	5	9	8	6	14	6
	IRRAWADDY DIVISION.										
10	Bassein ...	219	205	59	63	22	20	9	11	23	23
11	Henzada ...	145	127	30	32	11	10	7	8	7	10
12	Pyapôn ...	45	44	8	12	4	8	2	4	7	3
13	Kyaiklat ...	71	55	13	14	9	6	7	3	5	4
	TENASSERIM DIVISION.										
14	Thatôn ...	96	73	43	25	13	15	4	5	6	13
15	Moulmein ...	288	235	91	83	29	19	18	19	47	22
16	Tavoy ...	115	104	51	56	19	24	12	9	35	18
17	Mergui ...	80	72	39	45	35	46	46	44	43	43
18	Toungoo ...	46	37	21	31	12	16	16	15	16	8
	MAGWE DIVISION.										
19	Allanmyo ...	79	69	22	21	6	7	8	3	9	7
20	Yenangyaung ...	84	66	20	18	7	3	1	4	13	4
21	Chauk ...	52	51	10	17	11	11	8	4	8	9
22	Pakôkku ...	164	153	44	59	28	36	22	29	28	26
	MANDALAY DIVISION.										
23	Mandalay ...	953	800	284	364	144	156	109	101	148	127
24	Mandalay Cantmt.	55	41	13	21	4	6	8	4	12	2
25	Maymyo ...	81	73	31	39	9	7	5	3	10	12
26	Maymyo Cantmt.	10	9	7	5	1	...	...	...	2	1
27	Myingyan ...	245	194	66	80	30	14	21	13	22	24
28	Pyinmana ...	109	87	32	32	13	12	11	14	17	9
	SAGAING DIVISION.										
29	Shwebo ...	89	66	23	28	13	7	1	...	10	2
30	Sagaing ...	87	91	17	20	5	5	1	3	3	4
31	Mônýwa ...	94	61	17	16	7	7	2	3	6	6
	Total of Towns, Burma.	5,637	4,861	1,609	1,768	632	633	444	400	747	629
	Total, Population ...	10,332	10,564	40,261	40,785	51,779	48,179	54,045	46,734	72,223	46,696
	Total, Ratio per 1,000 living.	545.59	460.15	39.96	43.35	12.21	13.14	8.22	8.56	10.34	13.47

the Towns of Burma having a population of 10,000 and above during the year 1938.

8		9		10		11		12		13		1
20 and under 30.		30 and under 40.		40 and under 50.		50 and under 60.		60 and upwards.		Total (all ages).		No.
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females	Males.	Females.	Males.	Females.	
79	39	67	34	85	26	72	25	76	48	548	308	1
846	591	1,182	538	980	372	744	323	1,032	695	7,318	4,886	2
...	...	1	...	2	...	3	...	1	...	8	2	3
55	38	72	42	73	38	70	32	88	55	572	391	4
24	16	24	19	26	10	22	11	35	25	207	140	5
28	27	32	14	33	13	23	11	37	25	239	163	6
61	33	85	36	59	20	22	14	41	38	441	290	7
115	57	107	49	83	48	58	27	79	74	801	593	8
35	29	38	19	30	27	36	14	39	40	260	205	9
123	71	158	81	117	63	78	43	114	90	922	670	10
60	25	63	39	61	32	54	36	84	90	522	409	11
24	16	42	12	37	8	25	12	30	18	224	137	12
23	17	30	24	29	14	20	13	44	33	251	183	13
38	31	55	26	46	33	45	20	60	41	406	282	14
137	112	196	88	155	68	136	73	269	168	1,366	887	15
112	43	107	40	84	21	61	45	85	66	681	426	16
45	44	47	48	57	35	49	24	23	14	464	415	17
74	40	82	45	76	29	51	11	70	50	464	282	18
17	13	22	20	27	8	16	16	27	36	233	200	19
33	21	30	14	22	16	12	16	32	33	254	195	20
16	19	25	18	22	9	9	11	15	18	176	167	21
67	56	57	61	48	50	49	51	85	137	592	658	22
331	243	359	281	305	262	251	212	434	572	3,318	3,118	23
32	13	28	10	13	12	8	8	41	37	214	154	24
45	30	45	22	44	12	13	10	32	22	315	230	25
3	2	4	1	3	...	3	1	2	1	35	20	26
78	46	59	44	46	32	40	34	78	87	685	568	27
49	23	48	21	34	6	25	21	49	53	387	278	28
18	17	25	13	19	10	12	6	28	28	238	177	29
23	16	19	21	27	17	24	14	41	43	247	234	30
15	14	29	6	15	7	15	8	33	34	233	162	31
2,606	1,742	3,138	1,686	2,658	1,298	2,046	1,142	3,104	2,671	22,621	16,830	
179,693	89,590	136,649	63,527	73,440	41,275	34,964	26,482	21,177	21,581	674,563	435,413	
14.50	19.44	22.96	26.54	36.19	31.45	58.52	43.12	146.57	123.77	33.53	38.65	

SUPPLEMENTARY ANNUAL STATEMENT NO. IV-A giving the Details of
of 10,000 and above

No.	Divisions and Towns.	Not exceeding one month.						
		Male.			Female.			Total of columns 5 and 8.
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	ARAKAN DIVISION.							
1	Akyab	22	10	32	15	6	21	53
	PEGU DIVISION.							
2	Rangoon	350	152	502	262	153	415	917
3	Rangoon Cantonment	...	1	1	...	...	...	1
4	Pegu	35	4	39	13	10	23	62
5	Letpadan	12	9	21	7	7	14	35
6	Syriam	14	6	20	9	6	15	35
7	Insein	23	13	36	13	10	23	59
8	Prome	41	13	54	37	18	55	109
9	Paungdè	3	6	9	5	2	7	16
	IRRAWADDY DIVISION.							
10	Bassein	40	25	65	28	23	51	116
11	Henzada	25	10	35	21	6	27	62
12	Pyapôn	12	3	15	4	1	5	20
13	Kyaiklat	16	7	23	5	7	12	35
	TENASSERIM DIVISION.							
14	Thatôn	18	10	28	11	8	19	47
15	Moulmein	41	13	54	33	21	54	108
16	Tavoy	5	20	25	3	14	17	42
17	Mergui	19	19	38	19	18	37	75
18	Toungoo	6	6	12	4	8	12	24
	MAGWE DIVISION.							
19	Allanmyo	8	6	14	10	8	18	32
20	Yenangyaung	23	4	27	9	6	15	42
21	Chauk	7	3	10	6	7	13	23
22	Pakôkku	18	12	30	20	7	27	57
	MANDALAY DIVISION.							
23	Mandalay	261	84	345	192	96	288	633
24	Mandalay Cantonment	17	6	23	17	1	18	41
25	Maymyo	13	9	22	16	8	24	46
26	Maymyo Cantonment	3	...	3	1	2	3	6
27	Myingyan	50	15	65	35	5	40	105
28	Pyinmana	18	7	25	8	9	17	42
	SAGAING DIVISION.							
29	Shwebo	16	14	30	16	10	26	56
30	Sagaing	12	12	24	17	3	20	44
31	Mônýwa	21	9	30	19	6	25	55
	Total of Towns, Burma ...	1,149	508	1,657	855	486	1,341	2,998
	Ratio per mille of births for last 3 columns only.	...	...	...	...	...	...	...

Deaths by Ages and Sexes under One year in the Towns having a population during the year 1938.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total Male, columns 5, 10 and 13.	Total Female, columns 8, 11 and 14.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(1)
55	48	103	21	19	40	108	88	196	1
959	862	1,821	237	257	494	1,698	1,534	3,232	2
...	2	2	..	...	...	1	2	3	3
87	64	151	15	25	40	141	112	253	4
26	14	40	4	6	10	51	34	85	5
29	26	55	6	5	11	55	46	101	6
56	43	99	15	8	23	107	74	181	7
149	138	287	25	27	52	228	220	448	8
25	26	51	7	5	12	41	38	79	9
137	120	257	17	34	51	219	205	424	10
93	87	180	17	13	30	145	127	272	11
27	34	61	3	5	8	45	44	89	12
38	39	77	10	4	14	71	55	126	13
51	43	94	17	11	28	96	73	169	14
186	152	338	48	29	77	288	235	523	15
67	71	138	23	16	39	115	104	219	16
23	18	41	19	17	36	80	72	152	17
27	21	48	7	4	11	46	37	83	18
51	42	93	14	9	23	79	69	148	19
43	39	82	14	12	26	84	66	150	20
35	29	64	7	9	16	52	51	103	21
104	91	195	30	35	65	164	153	317	22
475	381	856	133	131	264	953	800	1,753	23
27	17	44	5	6	11	55	41	96	24
52	40	92	7	9	16	81	73	154	25
4	4	8	3	2	5	10	9	19	26
150	118	268	30	36	66	245	194	439	27
72	62	134	12	8	20	109	87	196	28
50	36	86	9	4	13	89	66	155	29
53	61	114	10	10	20	87	91	178	30
57	30	87	7	6	13	94	61	155	31
3,208	2,758	5,966	772	762	1,534	5,637	4,861	10,498	
...	...	...	...	...	...	288·57	266·99	278·16	

ANNUAL STATEMENT NO. V.—Deaths registered according

1	2	3					
No.	Divisions and Districts.	Population (Census 1931).					
		Christians.	Mahome- dans.	Hindus.	Burmese or Buddhists.	Other classes.	Total.
ARAKAN DIVISION.							
1	Akyab	398	242,381	16,685	337,661	38,407	635,532
2	Kyaukpyu	212	6,694	768	195,152	17,466	220,292
3	Sandoway	1,258	6,286	696	118,322	2,683	129,245
PEGU DIVISION.							
4	Rangoon	30,888	70,791	140,901	135,466	22,369	400,415
5	Pegu	11,387	11,021	41,057	419,365	6,981	489,811
6	Tharrawaddy	7,140	5,511	9,068	481,051	3,040	505,810
7	Hanthawaddy	6,450	13,535	52,247	331,684	4,915	408,831
8	Insein	20,409	10,249	31,283	262,677	6,834	331,452
9	Prome	1,486	4,958	7,871	389,593	6,743	410,651
IRRAWADDY DIVISION.							
10	Bassein	39,738	11,393	15,647	499,482	4,783	571,043
11	Henzada	15,525	5,826	7,279	584,495	2,664	615,789
12	Myaungmya	24,091	15,150	13,083	386,071	6,389	444,784
13	Maubin	14,252	6,266	8,537	339,971	2,483	371,509
14	Pyapôn	12,085	7,162	22,560	287,659	4,692	334,158
TENASSERIM DIVISION.							
15	Thatôn	5,663	16,047	22,612	483,981	4,325	532,628
16	Amherst	9,385	31,865	24,645	438,021	12,317	516,233
17	Tavoy	4,487	3,051	3,733	164,579	4,114	179,964
18	Mergui	9,461	14,551	7,700	123,865	6,410	161,987
19	Toungoo	42,294	9,661	23,775	340,955	12,143	428,828
MAGWE DIVISION.							
20	Thayetmyo	511	1,995	2,276	253,442	15,953	274,177
21	Minbu	152	1,446	2,016	269,194	5,068	277,876
22	Magwe	2,388	5,286	10,314	478,521	3,064	499,573
23	Pakôkku	328	1,166	1,358	492,318	4,011	499,181
MANDALAY DIVISION.							
24	Mandalay... ..	9,684	24,456	28,386	304,476	4,634	371,636
25	Kyauksè	628	7,300	1,419	141,513	460	151,320
26	Meiktila	501	4,931	3,381	300,745	441	309,999
27	Myingyan	384	1,345	2,284	468,070	474	472,557
28	Yaméthin	2,514	15,343	7,323	360,353	5,287	390,820
SAGAING DIVISION.							
29	Shwebo	2,504	9,112	3,463	430,672	1,039	446,790
30	Sagaing	869	3,044	2,690	329,040	322	335,965
31	Lower Chindwin	308	1,156	1,338	380,084	548	383,434
Total ...		277,380	568,978	516,395	10,528,478	211,059	12,102,290

to classes in the Districts of Burma during the year 1938.

4						5						1
Number of deaths registered.						Ratio of deaths per 1,000 of population.						No.
Chris-tians.	Maho-medans.	Hindus.	Burmese or Buddhists	Other classes.	Total.	Chris-tians.	Maho-medans.	Hindus.	Burmese or Buddhists	Other classes.	Total.	
2	4,888	127	7,238	614	12,869	5·03	20·17	7·61	21·44	15·99	20·25	1
1	92	2	3,363	263	3,721	4·72	13·74	2·60	17·23	15·06	16·89	2
21	118	1	2,469	54	2,663	16·69	18·77	1·44	20·87	20·13	20·60	3
744	1,711	3,882	5,639	238	12,214	24·09	24·17	27·55	41·63	10·64	30·50	4
199	277	561	9,662	373	11,072	17·48	25·13	13·66	23·04	53·43	22·60	5
158	149	224	12,757	84	13,372	22·13	27·04	24·70	26·52	27·63	26·44	6
66	201	581	8,214	430	9,492	10·23	14·85	11·12	24·76	87·49	23·22	7
339	236	690	6,616	221	8,102	16·61	23·03	22·06	25·19	32·34	24·44	8
56	108	247	11,497	48	11,956	37·69	21·78	31·38	29·51	7·12	29·11	9
849	299	435	11,880	145	13,608	21·36	26·24	27·80	23·78	30·32	23·83	10
159	131	147	13,697	63	14,197	10·24	22·49	20·20	23·43	23·65	23·05	11
642	301	255	9,443	183	10,824	26·65	19·87	19·49	24·46	28·64	24·34	12
216	148	114	8,660	140	9,278	15·16	23·62	13·35	25·47	56·38	24·97	13
287	132	301	8,299	335	9,354	23·75	18·43	13·34	28·85	71·40	27·99	14
55	194	288	8,833	167	9,537	9·71	12·09	12·74	18·25	38·61	17·91	15
152	785	684	8,426	161	10,208	16·20	24·64	27·75	19·24	13·07	19·77	16
94	81	172	4,109	153	4,609	20·95	26·55	46·08	24·97	37·19	25·61	17
209	401	222	2,388	362	3,582	22·09	27·56	28·83	19·28	56·47	22·11	18
682	293	466	8,699	340	10,480	16·13	30·33	19·60	25·51	28·00	24·44	19
8	51	43	9,111	17	9,230	15·66	25·56	18·89	35·95	1·07	33·66	20
..	19	28	7,917	78	8,042	...	13·14	13·89	29·41	15·39	28·94	21
15	91	106	13,202	19	13,433	6·28	17·22	10·28	27·59	6·20	26·89	22
...	13	12	14,933	72	15,030	...	11·15	8·84	30·33	17·95	30·11	23
179	717	818	9,857	105	11,676	18·48	29·32	28·82	32·37	22·66	31·42	24
3	160	57	4,594	7	4,821	4·78	21·92	40·17	32·46	15·22	31·86	25
13	145	54	8,389	33	8,634	25·95	29·41	15·97	27·89	74·83	27·85	26
11	67	36	8,915	22	9,051	28·65	49·81	15·76	19·05	46·41	19·15	27
76	466	221	12,284	78	13,125	30·23	30·37	30·18	34·09	14·75	33·58	28
29	216	37	14,690	43	15,015	11·58	23·71	10·68	34·11	41·39	33·61	29
...	86	28	10,720	10	10,844	..	28·25	10·41	32·58	31·06	32·28	30
1	14	13	11,328	5	11,361	3·25	12·11	9·72	29·80	9·12	29·63	31
5,266	12,590	10,852	277,829	4,863	311,400	18·98	22·13	21·01	26·39	23·04	25·73	

SUPPLEMENTARY ANNUAL STATEMENT NO. V-A.—Deaths registered according to

1	2	3							
No.	Divisions and Districts.	Population (Census 1931).							
		Christians.		Mahomed ans.		Hindus.		Burmese or Buddhists.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
	ARAKAN DIVISION.								
1	Akyab ...	255	143	132,976	109,405	15,044	1,641	170,099	167,562
2	Kyaukpyu ...	104	108	3,736	2,958	716	52	94,038	101,114
3	Sandoway ...	664	594	3,476	2,810	606	90	58,022	60,300
	PEGU DIVISION.								
4	Rangoon ...	17,094	13,794	56,147	14,644	112,735	28,166	69,936	65,530
5	Pegu ...	5,702	5,685	7,912	3,109	27,279	13,778	208,666	210,699
6	Tharrawaddy ...	4,512	2,628	3,897	1,614	6,995	2,073	233,967	247,084
7	Hanthawaddy ...	3,696	2,754	9,570	3,965	35,741	16,506	166,559	165,125
8	Insein ...	10,559	9,850	6,969	3,280	22,244	9,039	131,650	131,027
9	Prome ...	832	654	3,345	1,613	5,955	1,916	189,346	200,247
	IRRAWADDY DIVISION.								
10	Bassein ...	19,647	20,091	8,228	3,165	13,366	2,281	247,527	251,955
11	Henzada ...	7,654	7,871	3,764	2,062	5,889	1,390	285,957	298,538
12	Myaungmya ...	12,302	11,789	12,071	3,079	11,534	1,549	195,197	190,874
13	Maubin ...	6,905	7,347	4,683	1,583	7,334	1,203	168,194	171,777
14	Pyapôn ...	6,346	5,739	6,182	980	16,987	5,573	146,589	141,070
	TENASSERIM DIVISION.								
15	Thatôn ...	2,840	2,823	10,386	5,661	14,853	7,759	244,310	239,671
16	Amherst ...	4,648	4,737	18,912	12,953	17,758	6,887	222,552	215,469
17	Tavoy ...	2,310	2,177	1,934	1,117	3,190	543	82,292	82,287
18	Mergui ...	4,964	4,497	7,849	6,702	5,709	1,991	62,713	61,152
19	Toungoo ...	21,371	20,923	6,473	3,188	15,328	8,447	170,327	170,628
	MAGWE DIVISION.								
20	Thayetmyo ...	287	224	1,256	739	1,727	549	124,297	129,145
21	Minbu ...	85	67	1,021	425	1,707	309	131,149	138,045
22	Magwe ...	1,581	807	4,153	1,133	8,928	1,386	234,162	244,359
23	Pakôkku ...	220	108	900	266	1,161	197	236,756	255,562
	MANDALAY DIVISION.								
24	Mandalay ...	5,508	4,176	14,053	10,403	19,224	9,162	149,491	154,985
25	Kyauksè ...	306	322	3,712	3,588	1,154	265	69,383	72,130
26	Meiktila ...	274	227	2,609	2,322	2,509	872	141,447	159,298
27	Myingyan ...	221	163	914	431	1,778	506	225,525	242,545
28	Yamèthin ...	1,390	1,124	8,126	7,217	5,130	2,193	176,535	183,818
	SAGAING DIVISION.								
29	Shwebo ...	1,339	1,165	4,775	4,337	2,671	792	204,650	226,022
30	Sagaing ...	408	461	1,704	1,340	1,888	802	155,655	173,385
31	Lower Chindwin ...	187	121	833	323	994	344	176,154	203,930
	Total ...	144,211	133,169	352,566	216,412	388,134	128,261	5,173,145	5,355,333

Sex in four main classes in the Districts of Burma during the year 1938

4								5								1
Number of deaths registered.								Ratio of deaths per 1,000 of population.								No.
Christians.		Mahomedans.		Hindus.		Burmese or Buddhists.		Christians.		Mahomedans.		Hindus.		Burmese or Buddhists.		
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
2	...	2,554	2,334	96	31	3,701	3,537	7·84	...	19·21	21·33	6·38	18·89	21·76	21·11	1
1	...	52	40	2	...	1,685	1,678	9·62	...	13·92	13·52	2·79	...	17·92	16·60	2
6	15	57	61	1	...	1,235	1,234	9·04	25·25	16·40	21·71	1·65	...	21·29	20·46	3
401	343	1,118	593	2,579	1,303	3,069	2,570	23·46	24·87	19·91	40·49	22·88	46·26	43·88	39·22	4
110	89	186	91	385	176	5,332	4,330	19·29	15·66	23·51	29·27	14·11	12·77	25·55	20·55	5
87	71	95	54	163	61	6,773	5,984	19·28	27·02	24·38	33·46	23·30	29·43	28·95	24·22	6
31	35	115	86	389	192	4,413	3,801	8·39	12·71	12·02	21·69	10·88	11·63	26·50	23·02	7
180	159	137	99	445	245	3,593	3,023	17·05	16·14	19·66	30·18	20·01	27·10	27·29	23·07	8
34	22	72	36	170	77	6,022	5,475	40·87	33·64	21·52	22·32	28·55	40·19	31·80	27·34	9
440	409	180	119	328	107	6,264	5,616	22·40	20·36	21·88	37·60	24·54	46·91	25·31	22·29	10
92	67	78	53	112	35	7,054	6,643	12·02	8·51	20·72	25·70	19·02	25·18	24·67	22·25	11
354	288	215	86	208	47	5,280	4,163	28·78	24·43	17·81	27·93	18·03	30·34	27·05	21·81	12
127	89	99	49	88	26	4,624	4,036	18·39	12·11	21·14	30·95	12·00	21·61	27·49	23·50	13
136	151	93	39	225	76	4,386	3,913	21·43	26·31	15·04	39·80	13·25	13·64	29·92	27·74	14
35	20	114	80	189	99	4,569	4,264	12·32	7·08	10·98	14·13	12·72	12·76	18·70	17·79	15
81	71	462	323	490	194	4,416	4,010	17·43	14·99	24·43	24·94	27·59	28·17	19·84	18·61	16
49	45	55	26	145	27	2,053	2,056	21·21	20·67	28·44	23·28	45·45	49·72	24·95	24·99	17
116	93	218	183	127	95	1,267	1,121	23·37	20·68	27·77	27·31	22·25	47·71	20·20	18·33	18
338	344	175	118	320	146	4,599	4,100	15·82	16·44	27·04	37·01	20·88	17·28	27·00	24·03	19
4	4	31	20	33	10	4,652	4,459	13·94	17·86	24·68	27·06	19·11	18·21	37·43	34·53	20
...	...	16	3	21	7	3,991	3,926	...	...	15·67	7·06	12·30	22·65	30·43	28·44	21
5	10	64	27	72	34	6,649	6,553	3·16	12·39	15·41	23·83	8·06	24·53	28·39	26·82	22
...	...	10	3	5	7	7,315	7,618	...	...	11·11	11·28	4·31	35·53	30·90	29·81	23
103	76	378	339	534	284	4,964	4,893	18·70	18·20	26·90	32·59	27·78	31·00	33·21	31·57	24
2	1	99	61	37	20	2,310	2,284	6·54	3·11	26·67	17·00	32·06	75·47	33·29	31·67	25
4	9	76	69	32	22	4,195	4,194	14·60	39·65	29·13	29·72	12·75	25·23	29·66	26·33	26
5	6	47	20	26	10	4,462	4,453	22·62	36·81	51·42	46·40	14·62	19·76	19·78	18·36	27
43	33	259	207	134	87	6,339	5,945	30·94	29·36	31·87	28·68	26·12	39·67	35·91	32·34	28
18	11	107	109	26	11	7,349	7,341	13·44	9·44	22·41	25·13	9·73	13·89	35·91	32·48	29
..	...	45	41	20	8	5,244	5,476	...	...	26·41	30·60	10·59	9·98	33·69	31·58	30
1	...	9	5	10	3	5,517	5,811	5·35	...	10·80	15·48	10·06	8·72	31·32	28·50	31
2,805	2,461	7,216	5,374	7,412	3,440	143,322	134,507	19·45	18·48	20·47	24·83	19·10	26·82	27·71	25·12	

ANNUAL STATEMENT NO. VI-A.—*Births and Deaths from different causes, registered*

1	2	3	4				5	6	7	8	9	10
No.	Divisions and Districts.	Population (Census 1931).	Births.			Birth rate.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory Diseases.
			Male.	Female.	Total.							
ARAKAN DIVISION.												
1	Akyab ...	595,194	10,678	9,958	20,636	34·67	2	62	...	8,172	511	364
2	Kyaukpyu ...	216,060	3,322	3,179	6,501	30·09	...	1	...	1,652	140	114
3	Sandoway ...	125,175	1,872	1,773	3,645	29·12	...	...	...	1,467	11	10
PEGU DIVISION.												
4	Pegu ...	460,395	6,850	6,495	13,345	28·99	58	8	34	2,974	31	6
5	Tharrawaddy ...	454,471	8,471	8,111	16,582	36·49	1	1	1	4,888	157	129
6	Hanthawaddy ...	384,785	6,349	5,826	12,175	31·64	13	21	2	2,064	35	26
7	Insein ...	279,595	4,526	4,259	8,785	31·42	11	5	35	2,466	44	31
8	Prome ...	360,469	5,766	5,527	11,233	31·16	...	..	1	5,018	73	2
IRRAWADDY DIVISION.												
9	Bassein ...	514,135	9,705	9,256	18,961	36·88	3	...	6	3,466	228	128
10	Henzada ...	571,395	10,237	9,674	19,911	34·85	...	7	...	5,891	266	85
11	Myaungmya ...	419,905	7,039	6,634	13,673	32·56	18	3	...	2,932	116	89
12	Maubin ...	346,353	6,728	6,313	13,041	37·65	2	5	6	4,452	58	61
13	Pyapôn ...	311,162	5,346	5,430	10,776	34·63	2	9	...	2,409	272	182
TENASSERIM DIVISION.												
14	Thatôn ...	509,166	7,563	7,234	14,797	29·06	7	2	24	5,390	28	7
15	Amherst ...	444,152	7,907	7,453	15,360	34·58	3	2	...	1,852	92	155
16	Tavoy ...	150,946	2,380	2,271	4,651	30·81	2	3	...	2,488	124	16
17	Mergui ...	141,582	2,305	2,215	4,520	31·92	...	...	...	1,580	66	59
18	Toungoo ...	391,922	5,676	5,464	11,140	28·42	321	2	1	3,656	141	61
MAGWE DIVISION.												
19	Thayetmyo ...	252,387	5,054	5,113	10,167	40·28	...	...	2	4,802	92	80
20	Minbu ...	265,217	4,762	4,598	9,360	35·29	1	...	53	4,320	101	109
21	Magwe ...	459,097	8,594	8,497	17,091	37·23	3	5	90	6,572	23	1
22	Pakôkku ...	476,066	9,600	9,310	18,910	39·72	...	1	211	6,567	217	25
MANDALAY DIVISION.												
23	Mandalay ...	196,687	2,472	2,438	4,910	24·96	...	...	68	2,446	41	31
24	Kyauksè ...	143,967	2,342	2,183	4,525	31·43	1	...	9	2,239	124	101
25	Meiktila ...	301,169	5,000	4,919	9,919	32·93	...	...	1,337	2,010	98	25
26	Myingyan ...	438,982	5,020	5,195	10,215	23·27	8	28	305	1,302	107	91
27	Yamèthin ...	358,090	8,511	8,237	16,748	46·77	20	...	42	4,179	83	161
SAGAING DIVISION.												
28	Shwebo ...	431,765	10,214	9,712	19,926	46·15	...	...	40	7,594	149	10
29	Sagaing ...	316,766	6,902	6,751	13,653	43·10	4	...	322	4,131	153	12
30	Lower Chindwin ...	372,634	7,700	7,457	15,157	40·68	...	...	17	4,805	194	1,255
Total, Rural Districts, Burma.		10,689,689	188,831	181,482	370,313	34·64	480	165	2,606	113,784	3,775	3,426

in the Rural Districts of Burma during the year 1938.

11							12	13	14											No.	
Injuries.							All other causes.	Total deaths from all causes.	Ratio of Deaths per 1,000 of population.												
Suicide.		Wounding or accident.	Snake-bite.	Killed by wild beasts.	Rabies.	Total.			Cholera	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.				
Male.	Female.																For the year.	Mean of previous five years			
1	2	133	2	...	2	140	2,721	11,972	0·00	0·10	...	13·73	0·86	0·61	0·24	4·57	20·11	19·01	1		
3	1	34	2	6	1	47	1,718	3,672	...	0·00	...	7·65	0·65	0·53	0·22	7·95	17·00	16·38	2		
4	2	27	2	3	...	38	1,049	2,575	...	...	...	11·72	0·09	0·08	0·30	8·38	20·57	20·03	3
2	4	49	87	3	4	149	6,506	9,766	0·13	0·02	0·07	6·46	0·07	0·01	0·32	14·13	21·21	16·15	4		
6	2	148	188	3	6	353	6,194	11,724	0·00	0·00	0·00	10·76	0·35	0·28	0·78	13·63	25·80	20·08	5		
8	2	43	63	1	3	120	6,497	8,778	0·03	0·05	0·01	5·36	0·09	0·07	0·31	16·88	22·81	18·87	6		
2	6	72	75	6	4	165	3,557	6,314	0·04	0·02	0·13	8·82	0·16	0·11	0·59	12·72	22·58	18·45	7		
5	2	33	68	1	6	115	4,464	9,673	...	...	0·00	13·92	0·20	0·01	0·32	12·38	26·83	24·18	8
4	1	46	24	...	5	80	7,780	11,691	0·01	...	0·01	6·74	0·44	0·25	0·16	15·13	22·74	15·41	9		
6	3	146	57	...	7	219	6,292	12,760	...	0·01	...	10·31	0·47	0·15	0·38	11·01	22·33	17·06	10		
1	4	74	59	2	2	142	6,584	9,884	0·04	0·01	...	6·98	0·28	0·21	0·34	15·68	23·54	20·96	11		
6	1	70	71	7	5	160	3,693	8,437	0·01	0·01	0·02	12·85	0·17	0·18	0·46	10·66	24·36	20·41	12		
1	...	133	51	...	16	201	5,484	8,559	0·01	0·03	...	7·74	0·87	0·58	0·65	17·62	27·51	24·74	13		
...	...	52	20	...	2	74	3,084	8,616	0·01	0·00	0·05	10·59	0·05	0·01	0·15	6·06	16·92	14·75	14		
3	2	80	42	1	1	129	5,515	7,748	0·01	0·00	...	4·17	0·21	0·35	0·29	12·42	17·44	16·75	15		
5	2	17	4	1	1	30	839	3,502	0·01	0·02	...	16·48	0·82	0·11	0·20	5·56	23·20	23·44	16		
1	1	65	8	2	1	78	920	2,703	...	...	...	11·16	0·47	0·42	0·55	6·50	19·09	20·08	17
9	3	59	44	...	10	125	4,869	9,176	0·82	0·01	0·00	9·33	0·36	0·16	0·32	12·42	23·41	18·66	18		
...	1	23	27	3	...	54	3,368	8,398	...	...	0·01	19·03	0·36	0·32	0·21	13·34	33·27	17·23	19
13	4	37	91	2	17	164	2,829	7,577	0·00	...	0·20	16·29	0·38	0·41	0·62	10·67	28·57	26·22	20		
6	5	47	199	2	8	267	4,877	11,838	0·01	0·01	0·20	14·32	0·05	0·00	0·58	10·62	25·79	17·50	21		
1	6	78	110	7	11	213	6,546	13,780	...	0·00	0·44	13·79	0·46	0·05	0·45	13·75	28·95	23·85	22		
1	...	13	17	...	3	34	1,545	4,165	...	...	0·35	12·44	0·21	0·16	0·17	7·86	21·18	22·64	23
1	...	27	31	2	3	64	1,921	4,459	0·01	...	0·06	15·55	0·86	0·70	0·44	13·34	30·97	24·91	24		
4	...	47	99	4	7	161	4,557	8,188	...	...	4·44	6·67	0·33	0·08	0·53	15·13	27·19	19·81	25
7	7	58	109	9	10	200	5,388	7,429	0·02	0·06	0·69	2·97	0·24	0·21	0·46	12·27	16·92	13·54	26		
3	4	56	68	2	8	141	7,236	11,862	0·06	...	0·12	11·67	0·23	0·45	0·39	20·21	33·13	21·93	27		
6	4	58	162	6	13	249	6,482	14,524	...	...	0·09	17·59	0·35	0·02	0·58	15·01	33·64	30·52	28
8	1	39	138	1	16	203	5,333	10,158	0·01	...	1·02	13·04	0·48	0·04	0·64	16·84	32·07	25·32	29		
7	3	48	137	5	6	206	4,489	10,966	...	...	0·05	12·89	0·52	3·37	0·55	12·05	29·43	25·78	30
124	73	1,812	2,055	79	178	4,321	132,337	260,894	0·04	0·02	0·24	10·64	0·35	0·32	0·40	12·38	24·41	20·08			

ANNUAL STATEMENT NO. VI-B.—*Births and Deaths registered from*

1	2	3	4				5	6	7	8	9	10
No.	Divisions and Towns.	Population (Census 1931).	Births.			Birth rate.	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.
			Male.	Female.	Total.							
ARAKAN DIVISION.												
1	Akyab ...	38,094	447	364	811	21·29	...	...	...	53	56	207
2	Minbya ...	2,244	45	43	88	39·22	...	...	...	23	2	1
3	Kyaukpyu ...	4,232	80	70	150	35·44	...	...	1	13	2	2
4	Sandoway ...	4,070	50	47	97	23·83	...	...	...	26	...	15
PEGU DIVISION.												
5	Rangoon ...	398,967	5,602	5,487	11,089	27·79	7	79	13	293	719	3,670
6	Rangoon Cantonment	1,448	4	2	6	4·14	...	...	...	...	1	1
7	Pegu ...	21,626	392	365	757	35·00	8	1	...	156	42	152
8	Nyaunglebin ...	7,790	167	143	310	39·79	...	...	3	29	8	88
9	Tharrawaddy ...	7,131	126	116	242	33·94	...	...	1	33	7	25
10	Thônzè ...	7,962	154	141	295	37·05	...	...	2	43	7	58
11	Zigôn ...	6,365	105	78	183	28·75	...	...	19	37	16	37
12	Letpadan ...	12,160	166	142	308	25·33	...	...	2	86	16	32
13	Gyobingauk ...	7,675	132	95	227	29·58	...	...	58	33	10	36
14	Minhla ...	4,413	70	75	145	32·86	...	...	...	21	5	21
15	Nattalin ...	5,633	88	85	173	30·71	...	...	...	8	...	13
16	Syriam ...	15,070	281	233	519	34·44	...	...	...	65	20	85
17	Thôngwa ...	8,976	135	121	256	28·52	...	...	...	26	8	77
18	Insein ...	20,487	280	258	538	26·26	...	...	...	58	48	134
19	Mingaladon Cantmnt.	3,910	47	36	83	21·23	...	...	...	13	12	22
20	Thamaing ...	5,645	73	63	136	24·09	...	...	...	53	2	16
21	Kamayut ...	7,256	123	102	225	31·01	...	1	...	116	4	10
22	Thingangyun ...	7,984	70	82	152	19·04	...	...	...	75	1	20
23	Kanbe ...	6,575	104	91	195	29·66	2	...	...	63	2	5
24	Prome ...	28,295	579	560	1,139	40·25	...	...	4	129	73	269
25	Shwedaung ...	8,408	141	139	280	33·30	...	...	1	206	6	49
26	Paungdè ...	13,479	191	165	356	26·41	1	...	23	75	28	94
IRRAWADDY DIVISION.												
27	Bassein ...	45,662	677	684	1,361	29·81	8	1	16	111	137	402
28	Ngathainggyaung ...	5,380	90	84	174	32·34	...	...	7	20	9	29
29	Kyônpyaw ...	5,866	113	96	209	35·63	...	...	19	28	9	19
30	Henzada ...	28,542	412	392	804	28·17	...	...	...	163	41	137
31	Myanaung ...	9,072	172	144	316	34·83	...	...	1	95	23	47
32	Kyangin ...	6,780	104	109	213	31·42	...	...	...	45	18	24
33	Myaungmya ...	7,773	145	163	308	39·62	1	...	7	26	20	50
34	Wakèma ...	9,359	139	135	274	29·28	...	...	1	63	29	39
35	Moulmeingyun ...	7,747	123	143	266	34·34	...	...	...	48	28	43
36	Maubin ...	8,897	185	137	322	36·19	1	6	9	94	5	59
37	Yandoon ...	9,925	167	136	303	30·53	...	...	...	33	7	67
38	Danubyu ...	6,334	136	102	238	37·57	...	...	11	50	13	29
39	Pyapôn ...	12,338	160	168	328	26·58	...	...	...	93	52	52
40	Kyaiklat ...	10,658	218	177	395	37·06	...	...	...	55	23	51
TENASSERIM DIVISION.												
41	Thatôn ...	16,851	315	298	613	36·38	...	...	6	111	50	126
42	Kyaikto ...	6,611	99	82	181	27·38	...	...	8	27	13	19
43	Moulmein ...	65,506	958	951	1,909	29·14	...	...	...	274	142	506
44	Kawkareik ...	6,575	154	127	281	42·74	...	...	...	52	2	19
45	Tavoy ...	29,018	471	496	967	33·32	...	...	...	443	49	150

different causes in the Towns of Burma during the year 1938—contd.

11							12	13	14									
Injuries.							All other causes.	Total deaths from all causes.	Ratio of Deaths per 1,000 of population.									
Suicide.		Wounding or accident.	Snake-bite.	Killed by wild beasts.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
Male.	Female.																For the year.	Mean of previous five years.
3	...	36	1	1	...	41	499	856	...	...	...	1.39	1.47	5.43	1.08	13.10	22.47	19.45
...	...	1	...	...	...	1	14	41	...	...	...	10.25	0.89	0.45	0.45	6.24	18.27	26.65
...	...	2	...	...	...	2	29	49	...	...	0.24	3.07	0.47	0.47	0.47	6.85	11.58	15.50
...	...	8	...	...	...	8	39	88	...	...	...	6.39	...	3.69	1.97	9.58	21.62	21.08
5	3	319	6	...	4	337	7,086	12,204	0.02	0.20	0.03	0.73	1.80	9.20	0.84	17.76	30.59	24.85
...	8	10	...	...	...	...	0.69	0.69	...	5.52	6.91	5.66
1	...	13	...	...	...	14	590	963	0.37	0.05	...	7.21	1.94	7.03	0.65	27.28	44.53	37.60
...	...	8	...	...	...	8	207	343	...	...	0.39	3.72	1.03	11.30	1.03	26.57	44.03	36.17
...	...	27	1	...	...	28	105	199	...	...	0.14	4.63	0.98	3.51	3.93	14.72	27.91	22.75
...	...	1	...	...	...	1	177	288	...	...	0.25	5.40	0.88	7.28	0.13	22.23	36.17	28.36
...	...	5	...	...	...	5	121	235	...	...	2.99	5.81	2.51	5.81	0.79	90.01	36.92	29.98
...	...	39	...	...	1	40	171	347	...	...	0.16	7.07	1.32	2.63	3.29	14.06	28.54	20.58
1	...	25	3	...	...	29	159	325	...	...	7.56	4.30	1.30	4.69	3.78	20.72	42.35	35.88
...	1	4	1	...	...	6	89	142	...	...	...	4.76	1.13	4.76	1.36	20.17	32.18	19.13
...	...	2	...	...	...	2	89	112	...	...	...	1.42	...	2.31	0.36	15.80	19.88	22.08
1	1	20	...	...	...	22	210	402	...	...	...	4.31	1.33	5.64	1.46	13.93	26.68	22.87
...	...	11	1	...	...	12	189	312	...	...	...	2.90	0.89	8.58	1.34	21.06	34.76	27.90
1	...	56	...	...	...	57	434	731	...	...	...	2.83	2.34	6.54	2.78	21.18	35.68	24.38
...	29	76	...	...	...	3.32	3.07	5.63	...	7.42	19.44	11.36
...	196	267	...	...	...	9.39	0.35	2.83	...	34.72	47.30	39.61
...	...	2	...	...	...	2	144	277	...	0.14	...	15.99	6.55	1.38	0.28	19.85	38.18	29.82
...	137	233	...	...	...	9.39	0.13	2.51	...	17.16	29.18	21.37
...	...	3	...	...	...	3	129	204	0.30	...	...	9.58	0.30	0.76	0.46	19.62	31.03	24.06
...	...	46	...	...	3	49	870	1,394	...	...	0.14	4.56	2.58	9.51	1.73	30.75	49.27	36.40
...	...	4	...	...	...	4	158	424	...	...	0.12	24.50	0.71	5.83	0.48	18.79	50.43	26.90
...	1	25	5	...	1	32	212	465	0.07	...	1.71	5.56	2.08	6.97	2.37	15.73	34.50	29.16
2	1	23	1	...	5	32	885	1,592	0.18	0.02	0.35	2.43	3.00	8.80	0.70	19.38	34.86	33.98
1	1	8	...	...	...	10	108	183	...	...	1.30	3.72	1.67	5.39	1.86	20.07	34.01	31.60
...	...	3	...	...	...	3	64	142	...	...	3.24	4.77	1.53	3.24	0.51	10.91	24.21	27.00
3	...	30	1	...	1	35	555	931	...	...	...	5.71	1.44	4.80	1.23	19.45	32.62	28.30
...	...	5	...	...	...	5	136	307	...	...	0.11	10.47	2.54	5.18	0.55	14.99	33.84	32.78
...	112	199	...	...	...	6.64	2.65	3.54	...	16.52	29.35	33.63
...	...	3	1	...	1	5	185	294	0.13	...	0.90	3.34	2.57	6.43	0.64	23.80	37.82	37.33
1	...	12	...	...	1	14	165	311	...	...	0.11	6.73	3.10	4.17	1.50	17.63	33.23	31.76
...	...	17	...	...	...	17	199	335	...	...	...	6.20	3.61	5.55	2.19	25.69	43.24	40.84
...	...	8	...	...	...	8	129	311	0.11	0.67	1.01	10.57	0.56	6.63	0.90	14.50	34.96	27.81
...	...	19	...	...	...	19	195	321	...	...	...	3.32	0.71	6.75	1.91	19.65	32.34	29.22
...	...	1	...	...	...	1	105	209	...	...	1.74	7.89	2.05	4.58	0.16	16.58	33.00	29.81
1	...	6	...	...	1	8	156	361	...	...	...	7.54	4.21	4.21	0.65	12.64	29.26	30.36
...	...	14	...	...	...	14	291	434	...	...	...	5.16	2.16	4.79	1.31	27.30	40.72	38.51
2	...	36	...	...	1	39	356	688	...	...	0.36	6.59	2.97	7.48	2.31	21.13	40.83	37.30
...	...	4	1	...	1	6	160	233	...	...	1.21	4.08	1.97	2.87	0.91	24.20	35.24	32.28
1	...	76	1	...	1	79	1,252	2,253	...	...	...	4.18	2.17	7.72	1.21	19.11	34.39	28.86
...	134	207	...	...	...	7.91	0.30	2.89	...	20.38	31.48	36.96
1	..	29	...	...	...	30	435	1,107	...	...	...	15.27	1.69	5.17	1.03	14.99	38.15	37.13

ANNUAL STATEMENT NO. VI-B.—Births and Deaths registered from

1	2	3	4				5	6	7	8	9	10
No.	Divisions and Towns.	Population (Census 1931).	Births.				Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.
			Male.	Female.	Total.	Birth rate.						
	TENASSERIM DIVISION —concl'd.											
46	Mergui ...	20,405	403	428	831	40·73	...	...	...	272	21	199
47	Toungoo ...	23,223	353	342	695	29·93	70	...	22	104	77	95
48	Shwegyin ...	5,876	101	95	196	33·36	...	...	10	39	8	47
49	Pyu ...	7,807	148	140	288	36·89	3	...	6	43	29	46
	MAGWE DIVISION.											
50	Thayetmyo ...	9,279	183	190	373	40·20	...	...	...	68	13	49
51	Allanmyo ...	12,511	188	191	379	30·29	...	...	4	191	32	90
52	Minbu ...	6,005	130	116	246	40·97	...	...	21	19	5	52
53	Salin ...	6,654	124	103	227	34·11	...	...	26	59	8	73
54	Magwe ...	8,209	156	146	302	36·79	...	...	39	20	19	58
55	Taungdwingyi ...	8,339	214	204	418	50·13	...	...	52	34	3	132
56	Yenangyaung ...	11,098	246	250	496	44·69	...	...	26	19	22	85
57	Chauk ...	12,830	165	181	346	26·97	...	...	18	99	9	26
58	Pakôkku ...	23,115	350	354	704	30·46	...	...	315	37	23	277
	MANDALAY DIVISION.											
59	Mandalay ...	134,950	4,217	3,524	7,741	57·36	...	...	793	458	320	1,403
60	Mandalay Cantonment	12,982	174	160	334	25·73	...	...	7	83	8	42
61	Maymyo ...	16,586	428	416	844	50·89	...	...	...	79	44	153
62	Maymyo Cantonment	4,749	76	66	142	29·90	...	...	...	3	8	15
63	Myitngè ...	5,682	89	67	156	27·46	...	...	5	14	4	23
64	Kyauksè ...	7,353	145	156	301	40·94	...	...	...	91	23	29
65	Meiktila ...	8,830	206	180	386	43·71	...	...	107	34	16	73
66	Myingyan ...	25,457	586	498	1,084	42·58	...	1	94	54	42	295
67	Nyaung-u ...	8,118	166	145	311	38·31	...	...	65	25	3	31
68	Yamèthin ...	9,291	197	216	413	44·45	...	...	2	22	8	72
69	Pyinmana ...	17,656	386	327	713	40·38	1	...	27	106	39	114
70	Pyawbwè ...	5,783	109	113	222	38·39	...	...	76	72	13	22
	SAGAING DIVISION.											
71	Shwebo ...	11,286	307	248	555	49·18	...	...	1	18	17	55
72	Ye-u ...	3,739	78	77	155	41·45	...	...	...	20	6	12
73	Sagaing ...	14,127	289	270	559	39·57	3	...	...	37	16	133
74	Myinmu ...	5,072	120	112	232	45·74	1	...	8	9	4	27
75	Mônnya ...	10,800	213	205	418	38·70	...	...	3	55	20	136
	Total of Towns, Burma	1,412,601	25,037	23,252	48,289	34·18	106	89	1,939	5,748	2,625	10,871
	Total of Rural Districts, Burma.	10,689,689	188,831	181,482	370,313	34·64	480	165	2,606	113,784	3,775	3,426
	GRAND TOTAL, BURMA	12,102,290	213,868	204,734	418,602	34·59	586	254	4,545	119,532	6,400	14,297
	TOWNS FOR WHICH CORRESPONDING RURAL FIGURES ARE NOT GIVEN IN VI-A.											
1	Bhamo ...	8,011	118	135	253	31·58	...	...	...	75	35	74
2	Myitkyina ...	7,328	162	155	317	43·26	...	...	1	78	27	97
3	Mawlaik ...	2,278	57	62	119	52·24	...	...	2	46	3	23
4	Lashio ...	4,638	120	134	254	54·76	...	...	...	96	12	69
5	Taunggyi ...	8,652	206	210	416	48·08	...	13	32	67	22	86
6	Kalaw ...	3,621	82	58	140	38·66	...	...	5	29	11	18

different causes in the Towns of Burma during the year 1938—concl'd.

11							12	13	14									
Injuries.							All other causes.	Total deaths from all causes.	Ratio of Deaths per 1,000 of population.									
Suicide.		Wounding or accident.	Snake-bite.	Killed by wild beasts.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and Diarrhoea.	Respiratory Diseases.	Injuries.	All other causes.	From all causes.	
Male.	Female.																For the year.	Mean of previous five years.
1	2	39	...	...	1	43	344	879	...	...	...	13.33	1.03	9.75	2.11	16.86	43.08	41.76
...	1	29	...	1	1	32	346	746	3.01	...	0.95	4.48	3.32	4.09	1.38	14.90	32.12	27.45
...	...	...	...	...	...	...	110	214	...	...	1.70	6.64	1.36	8.00	...	18.72	36.42	31.18
...	...	14	...	...	...	14	203	344	0.38	...	0.77	5.51	3.71	5.89	1.79	26.00	44.06	32.05
...	...	6	1	...	...	7	262	399	...	...	...	7.33	1.40	5.28	0.75	28.24	43.00	40.76
...	...	9	2	...	1	12	104	433	...	...	0.32	15.27	2.56	7.19	0.96	8.31	34.61	30.13
1	...	5	1	...	...	7	93	197	...	...	3.50	3.16	0.83	8.66	1.17	15.49	32.81	33.04
1	...	...	1	...	...	2	100	268	...	...	3.91	8.87	1.20	10.97	0.30	15.03	40.28	35.53
...	...	15	1	...	...	16	158	310	...	...	4.75	2.44	2.31	7.07	1.95	19.25	37.76	35.01
...	1	16	...	...	2	19	253	493	...	...	6.24	4.08	0.36	15.83	2.28	30.34	59.12	48.06
...	...	17	...	...	1	18	279	449	...	...	2.34	1.71	1.98	7.66	1.62	25.14	40.46	39.21
1	...	24	...	...	...	25	166	343	...	...	1.40	7.72	0.70	2.03	1.95	12.94	26.73	20.55
1	...	10	1	...	3	15	583	1,250	...	...	13.63	1.60	1.00	11.98	0.65	25.22	54.08	40.48
6	...	54	1	...	6	67	3,395	6,436	...	...	5.88	3.39	2.37	10.40	0.50	25.16	47.69	40.89
1	...	13	1	...	1	16	212	368	...	...	0.54	6.39	0.62	3.24	1.23	16.33	28.35	26.84
3	...	13	...	...	1	17	252	545	...	...	...	4.76	2.65	9.22	1.02	15.19	32.86	28.39
...	...	1	...	...	...	1	28	55	...	...	...	0.63	1.68	3.16	0.21	5.90	11.58	11.67
...	...	1	1	...	...	2	59	107	...	...	0.88	2.46	0.70	4.05	0.35	10.38	18.83	18.55
1	...	15	...	...	...	16	203	362	...	...	...	12.38	3.13	3.94	2.18	27.61	49.23	33.43
...	...	19	1	...	1	21	195	446	...	...	12.12	3.85	1.81	8.27	2.38	22.08	50.51	31.37
1	1	44	2	...	2	50	717	1,253	...	0.04	3.67	2.12	1.65	11.59	1.96	28.17	49.22	38.61
...	...	5	1	...	...	6	239	369	...	...	8.01	3.08	0.37	3.82	0.74	29.44	45.45	31.61
...	...	7	1	...	...	8	152	264	...	...	0.22	2.37	0.86	7.75	0.86	16.36	28.41	27.10
3	...	14	...	...	2	19	359	665	0.06	...	1.53	6.00	2.21	6.46	1.08	20.33	37.66	34.75
...	...	4	2	...	2	8	143	334	...	...	13.14	12.45	2.25	3.80	1.38	24.73	57.76	39.18
...	...	28	1	1	...	30	294	415	...	...	0.09	1.59	1.51	4.87	2.66	26.05	36.77	34.77
...	...	1	...	...	...	1	37	76	...	...	...	5.35	1.60	3.21	0.27	9.90	20.33	29.95
1	...	28	...	1	...	30	262	481	0.21	...	...	2.62	1.13	9.41	2.12	18.55	34.05	31.40
...	...	3	2	...	1	6	150	205	0.20	...	1.58	1.77	0.79	5.32	1.18	29.57	40.42	36.55
...	...	7	...	...	...	7	174	395	...	...	0.28	5.09	1.85	12.59	0.65	16.11	36.57	35.56
45	13	1,392	43	4	46	1,543	27,585	50,506	0.08	0.06	1.37	4.07	1.86	7.70	1.09	19.53	35.75	30.32
124	73	1,812	2055	79	178	4,321	132,337	260,894	0.04	0.02	0.24	10.64	0.35	0.32	0.40	12.38	24.41	20.08
169	86	3,204	2098	83	224	5,864	159,922	311,400	0.05	0.02	0.38	9.88	0.53	1.18	0.48	13.21	25.73	21.27
...	...	5	...	...	2	7	73	264	...	...	...	9.36	4.37	9.24	0.87	9.11	32.95	31.26
...	...	12	...	1	...	13	104	320	...	...	0.14	10.64	3.68	13.24	1.77	14.19	43.67	37.50
...	...	1	...	...	...	1	30	105	...	...	0.88	20.19	1.32	10.10	0.44	13.17	46.09	37.49
...	...	8	...	...	...	8	59	244	...	...	...	20.70	2.59	14.88	1.72	12.72	52.61	42.52
1	1	5	...	2	...	9	169	398	...	1.50	3.70	7.74	2.54	9.94	1.04	19.53	46.00	29.36
...	...	4	...	...	...	4	42	109	...	...	1.38	8.01	3.04	4.97	1.10	11.60	30.10	20.49

STATEMENT VI-B (a).—*Supplement*

No.	Divisions and Towns.	Population (Census 1931).	Fevers.									
			1		2		3		5		6	
			Malaria.		Enteric Fever.		Measles.		Kala-Azar.		Influenza.	
			Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
ARAKAN DIVISION.												
1	Akyab ...	38,094	46	1·21	6	0·16	...	...	...	...	...	...
2	Minbya ...	2,244	23	10·25	...	...	...	...	...	...	...	...
3	Kyaukpyu ...	4,232	...	...	3	0·71	...	...	...	...	...	...
4	Sadoway ...	4,070	19	4·67	...	...	...	...	...	...	...	...
PEGU DIVISION.												
5	Rangoon ...	398,967	174	0·44	70	0·18	1	0·00	2	0·01	4	0·01
6	Rangoon Cantonment	1,448	...	...	...	...	...	...	...	...	...	...
7	Pegu ...	21,626	60	2·77	4	0·18	...	...	...	...	...	...
8	Nyaunglebin ...	7,790	19	2·44	2	0·26	1	0·13	...	...	...	...
9	Tharrawaddy ...	7,131	7	0·98	1	0·14	...	...	...	...	...	...
10	Thônzè ...	7,962	42	5·28	...	...	...	...	...	...	...	...
11	Zigôn ...	6,365	28	4·40	3	0·47	...	...	...	...	...	...
12	Letpadan ...	12,160	80	6·58	1	0·08	...	...	...	...	1	0·08.
13	Gyobingauk ...	7,675	25	3·26	1	0·13	...	...	...	...	...	...
14	Minhla ...	4,413	19	4·31	...	...	...	...	...	...	...	...
15	Nattalin ...	5,633	8	1·42	...	...	...	...	...	...	...	...
16	Syriam ...	15,070	8	0·53	8	0·53	...	...	...	...	...	...
17	Thôngwa ...	8,976	16	1·78	...	...	...	...	...	...	...	...
18	Insein ...	20,487	19	0·93	1	0·05	...	...	...	...	...	...
19	Mingaladon Cantonment	3,910	...	...	...	...	...	...	...	...	...	...
20	Thamaing ...	5,645	...	...	...	...	...	...	...	...	...	...
21	Kamayut ...	7,256	...	...	...	...	...	...	...	...	...	...
22	Thingangyun ...	7,984	2	0·25	...	...	...	...	...	...	...	...
23	Kanbe ...	6,575	1	0·15	...	...	...	...	...	...	...	...
24	Prome ...	28,295	57	2·01	9	0·32	...	...	...	...	...	...
25	Shwedaung ...	8,408	188	22·36	...	...	2	0·24	...	...	2	0·24
26	Paungdè ...	13,479	62	4·60	3	0·22	...	...	...	...	...	...
IRRAWADDY DIVISION.												
27	Bassein ...	45,662	52	1·14	19	0·42	1	0·02	1	0·02	...	...
28	Ngathainggyaung ...	5,380	16	2·97	2	0·37	1	0·19	...	...	...	...
29	Kyônpyaw ...	5,866	25	4·26	...	...	...	...	...	...	...	...
30	Henzada ...	28,542	38	1·33	5	0·18	...	...	...	...	4	0·14
31	Myanaung ...	9,072	80	8·82	1	0·11	2	0·22	...	...	...	...
32	Kyangin ...	6,780	42	6·19	1	0·15	...	...	...	...	...	...
33	Myaungmya ...	7,773	15	1·93	6	0·77	...	...	...	...	...	...
34	Wakèma ...	9,359	30	3·21	4	0·43	...	...	1	0·11	...	...
35	Moulmeingyun ...	7,747	42	5·42	1	0·13	...	...	...	...	...	...
36	Maubin ...	8,897	...	...	1	0·11	...	...	...	...	...	...
37	Yandoon ...	9,925	8	0·81	15	1·51	...	...	...	...	7	0·71
38	Danubyu ...	6,334	2	0·32	1	0·16	...	...	...	...	...	...
39	Pyapôn ...	12,338	73	5·92	3	0·24	...	...	...	...	...	...
40	Kyaiklat ...	10,658	32	3·00	4	0·38	...	...	...	...	...	...
TENASSERIM DIVISION.												
41	Thatôn ...	16,851	86	5·10	1	0·06	...	...	...	...	...	...
42	Kyaikto ...	6,611	19	2·87	2	0·30	...	...	...	...	...	...
43	Moulmein ...	65,506	115	1·76	64	0·98	...	...	...	...	...	...
44	Kawkareik ...	6,575	40	6·08	...	...	...	...	...	...	...	...
45	Tavoy ...	29,018	240	8·27	2	0·07	...	...	...	...	...	...

NOTE.—Column 4, “Relapsing Fever”

to Annual Statement VI-B, 1938.

										Dysentery and	
7		8		9		10		11		12	
Cerebrospinal Fever.		Typhus Fever.		Blackwater Fever.		Other Fevers.		Total Fevers.		Dysentery.	
Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
...	1	0.03	53	1.39	53	1.39
...	23	10.25	1	0.45
...	10	2.36	13	3.07	1	0.24
...	7	1.72	26	6.39	...	...
39	0.10	3	0.01	...	...	...	...	293	0.73	316	0.79
..	1	0.69
1	0.05	...	...	...	...	91	4.21	156	7.21	21	0.97
...	7	0.90	29	3.72	3	0.39
...	25	3.51	33	4.63	6	0.84
...	1	0.13	43	5.40	2	0.25
...	6	0.94	37	5.81	14	2.20
...	4	0.33	86	7.07	14	1.15
...	7	0.91	33	4.30	5	0.65
...	2	0.45	21	4.76	2	0.45
...	8	1.42	...	...
...	49	3.25	65	4.31	11	0.73
...	10	1.11	26	2.90	3	0.33
...	1	0.05	37	1.81	58	2.83	32	1.56
...	13	3.32	13	3.32	3	0.77
...	53	9.39	53	9.39	1	0.18
...	116	15.99	116	15.99	4	0.55
...	73	9.14	75	9.39	1	0.13
...	62	9.43	63	9.58	2	0.30
...	63	2.23	129	4.56	37	1.31
...	14	1.67	206	24.50	3	0.36
2	0.15	...	...	...	...	8	0.59	75	5.56	16	1.19
...	38	0.83	111	2.43	47	1.03
...	1	0.19	20	3.72	4	0.74
...	2	0.51	28	4.77	9	1.53
...	116	4.06	163	5.71	25	0.88
...	12	1.32	95	10.47	15	1.65
...	2	0.29	45	6.64	9	1.33
...	5	0.64	26	3.34	12	1.54
...	28	2.99	63	6.73	21	2.24
...	5	0.65	48	6.20	19	2.45
...	93	10.45	94	10.57	4	0.45
...	3	0.30	33	3.32	7	0.71
...	47	7.42	50	7.89	3	0.47
...	17	1.38	93	7.54	29	2.35
...	19	1.78	55	5.16	18	1.69
...	24	1.42	111	6.59	16	0.95
1	0.15	...	...	...	...	5	0.76	27	4.08	8	1.21
4	0.06	...	...	...	...	91	1.39	274	4.18	64	0.98
...	12	1.83	52	7.91	...	...
...	1	0.03	200	6.89	443	15.27	26	0.90

(Spirochaeta)—no deaths reported.

STATEMENT VI-B (a).—Supplement to

No.	Divisions and Towns.	Population (Census 1931).	Diarrhœa.		Respiratory Diseases.							
			13		14		15		16		17	
			Diarrhœa.		Pneumonia.		Pulmonary Tuberculosis.		Whooping cough.		Other Respiratory Diseases.	
			Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
ARAKAN DIVISION.												
1	Akyab ...	38,094	3	0·08	109	2·86	46	1·21	1	0·03	51	1·34
2	Minbya ...	2,244	1	0·45	...	...	...	...	1	0·45	...	...
3	Kyaukpyu ...	4,232	1	0·24	1	0·24	1	0·24	...	...	...	...
4	Sandoway ...	4,070	...	...	5	1·23	3	0·74	...	...	7	1·72
PEGU DIVISION.												
5	Rangoon ...	398,967	403	1·01	1,887	4·73	873	2·19	1	0·00	909	2·28
6	Rangoon Cantonment	1,448	...	...	...	...	...	...	...	...	1	0·69
7	Pegu ...	21,626	21	0·97	23	1·06	59	2·73	...	...	70	3·24
8	Nyaunglebin ...	7,790	5	0·64	21	2·70	19	2·44	...	...	48	6·16
9	Tharrawaddy ...	7,131	1	0·14	8	1·12	14	1·96	...	...	3	0·42
10	Thônzè ...	7,962	5	0·63	42	5·28	10	1·26	...	...	6	0·75
11	Zigôn ...	6,365	2	0·31	15	2·36	13	2·04	...	...	9	1·41
12	Letpadan ...	12,160	2	0·16	4	0·33	28	2·30	...	...	...	...
13	Gyobingauk ...	7,675	5	0·65	14	1·82	19	2·48	...	...	3	0·39
14	Minhla ...	4,413	3	0·68	9	2·04	11	2·49	...	...	1	0·23
15	Nattalin ...	5,633	...	...	1	0·18	2	0·36	1	0·18	9	1·60
16	Syriam ...	15,070	9	0·60	52	3·45	24	1·59	...	...	9	0·60
17	Thôngwa ...	8,976	5	0·56	29	3·23	32	3·57	1	0·11	15	1·67
18	Insein ...	20,487	16	0·78	52	2·54	33	1·61	...	...	49	2·39
19	Mingaladon Cantonment	3,910	9	2·30	...	...	...	...	2	0·51	20	5·12
20	Thamaing ...	5,645	1	0·18	4	0·71	12	2·13	...	...	...	...
21	Kamayut ...	7,256	...	...	4	0·55	4	0·55	...	...	2	0·28
22	Thingangyun ...	7,984	...	...	6	0·75	5	0·63	...	...	9	1·13
23	Kanbe ...	6,575	...	...	...	...	1	0·15	...	...	4	0·61
24	Prome ...	28,295	36	1·27	57	2·01	51	1·80	1	0·04	160	5·65
25	Shwedaung ...	8,408	3	0·36	11	1·31	4	0·48	...	...	34	4·04
26	Paungdè ...	13,479	12	0·89	30	2·23	31	2·30	...	...	33	2·45
IRRAWADDY DIVISION.												
27	Bassein ...	45,662	90	1·97	54	1·18	133	2·91	...	...	215	4·71
28	Ngathainggyaung ...	5,380	5	0·93	16	2·97	9	1·67	...	...	4	0·74
29	Kyônpyaw ...	5,866	...	...	7	1·19	8	1·36	...	...	4	0·68
30	Henzada ...	28,542	16	0·56	50	1·75	24	0·84	...	...	63	2·21
31	Myanaung ...	9,072	8	0·88	10	1·10	18	1·98	...	...	19	2·09
32	Kyangin ...	6,780	9	1·33	9	1·33	14	2·06	...	...	1	0·15
33	Myaungmya ...	7,773	8	1·03	30	3·86	19	2·44	...	...	1	0·13
34	Wakèma ...	9,359	8	0·85	9	0·96	15	1·60	...	...	15	1·60
35	Moulmeingyun ...	7,747	9	1·16	14	1·81	25	3·23	...	...	4	0·52
36	Maubin ...	8,897	1	0·11	17	1·91	13	1·46	1	0·11	28	3·15
37	Yandoon ...	9,925	...	...	33	3·32	32	3·22	...	...	2	0·20
38	Danubyu ...	6,334	10	1·58	6	0·95	22	3·47	...	...	1	0·16
39	Pyapôn ...	12,338	23	1·86	20	1·62	21	1·70	...	...	11	0·89
40	Kyaiklat ...	10,658	5	0·47	23	2·16	22	2·06	...	...	6	0·56
TENASSERIM DIVISION.												
41	Thatôn ...	16,851	34	2·02	28	1·66	23	1·36	...	...	75	4·45
42	Kyaikto ...	6,611	5	0·76	3	0·45	3	0·45	...	...	13	1·97
43	Moulmein ...	65,506	78	1·19	165	2·52	179	2·73	3	0·05	159	2·43
44	Kawkareik ...	6,575	2	0·30	12	1·83	1	0·15	...	...	6	0·91
45	Tavoy ...	29,018	23	0·79	53	1·83	96	3·31	...	...	1	0·03

NOTE.—Column 4, “Relapsing Fever”

Annual Statement VI-B, 1938--contd.

Other Causes.															No.
18		19		20		21		22		23		24			
Ber-beri in- cluding Epide- mic Dropsy.		Acute Poliomyelitis.		Diphtheria.		Chicken-pox.		Mumps.		Tuberculosis of Joints.		Other Tuberculous Diseases.			
Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.		
11	0.29	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
1	0.24	...	...	...	...	...	...	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	...	...	4
265	0.66	4	0.01	15	0.04	...	...	2	0.01	3	0.01	84	0.21	5
1	0.69	...	...	...	...	...	...	...	...	...	...	...	...	6
3	0.14	...	...	1	0.05	...	...	...	...	...	...	...	...	7
32	4.11	...	...	...	...	...	...	...	...	...	...	4	0.51	8
...	...	...	...	...	...	...	...	...	...	...	...	2	0.28	9
...	...	...	...	...	...	...	...	...	...	...	...	...	...	10
1	0.16	...	...	...	...	...	...	...	...	...	...	2	0.31	11
...	...	...	...	1	0.08	...	...	...	...	...	...	1	0.08	12
4	0.52	...	...	...	...	...	...	...	...	...	...	4	0.52	13
1	0.23	...	...	...	...	...	...	1	0.23	...	...	...	...	14
...	...	...	...	...	...	...	...	...	...	...	...	...	...	15
5	0.33	...	...	1	0.07	...	...	...	...	...	...	1	0.07	16
4	0.45	...	...	...	...	...	...	...	...	...	...	1	0.11	17
1	0.05	...	...	1	0.05	...	...	...	...	...	...	4	0.20	18
...	...	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	2	0.35	20
1	0.14	...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	...	...	...	22
...	...	...	...	...	...	...	...	...	...	...	...	...	...	23
5	0.18	...	...	...	...	...	...	...	...	...	...	4	0.14	24
...	...	...	...	...	...	...	...	...	...	...	...	...	...	25
...	...	...	...	...	...	...	...	...	...	...	...	...	...	26
9	0.20	...	...	...	...	...	...	...	...	...	...	41	0.90	27
1	0.19	...	...	...	...	...	...	...	...	...	...	...	...	28
...	...	...	...	...	...	...	...	...	...	...	...	...	...	29
...	...	...	...	...	...	...	...	...	...	...	...	1	0.04	30
...	...	...	...	...	...	...	...	...	...	...	...	...	...	31
...	...	...	...	...	...	...	...	...	...	...	...	1	0.15	32
3	0.39	...	...	1	0.13	...	...	...	...	...	...	...	...	33
6	0.64	...	...	...	...	...	...	...	...	...	...	1	0.11	34
...	...	...	...	...	...	...	...	...	...	...	...	2	0.26	35
1	0.11	...	...	...	...	...	...	...	...	...	...	8	0.90	36
7	0.71	...	...	1	0.10	...	...	...	...	...	...	...	...	37
3	0.47	...	...	...	...	1	0.16	...	...	...	...	...	...	38
7	0.57	...	...	1	0.08	...	...	...	...	...	...	...	...	39
8	0.75	...	...	...	...	...	...	...	...	2	0.19	4	0.38	40
...	...	...	...	...	...	...	...	...	...	...	...	1	0.06	41
...	...	...	...	...	...	...	...	...	...	...	...	...	...	42
34	0.52	...	...	...	...	...	...	1	0.02	1	0.02	11	0.17	43
...	...	...	...	...	...	...	...	...	...	...	...	5	0.76	44
...	...	...	...	...	...	...	...	...	...	...	...	...	...	45

(Spirochaetal)—no deaths reported.

STATEMENT VI-B (a).—*Supplement to*

No.	Divisions and Towns.	Population (Census 1931).	Fevers.									
			1		2		3		5		6	
			Malaria.		Enteric Fever.		Measles.		Kala-Azar.		Influenza.	
			Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
TENASSERIM DIVISION. —concl'd.												
46	Mergui ...	20,405	141	6·91	4	0·20	3	0·15	...	...	...	...
47	Toungoo ...	23,223	60	2·58	10	0·43	...	...	...	...	...	...
48	Shwegyin ...	5,876	20	3·40	4	0·68	...	...	...	...	1	0·17
49	Pyu ...	7,807	36	4·61	...	...	...	...	...	...	1	0·13
MAGWE DIVISION.												
50	Thayetmyo ...	9,279	23	2·48	2	0·22	...	...	...	...	...	...
51	Allanmyo ...	12,511	54	4·32	24	1·92	...	...	...	...	102	8·15
52	Minbu ...	6,005	17	2·83	2	0·33	...	...	...	...	...	...
53	Salin ...	6,654	38	5·71	1	0·15	...	...	...	...	1	0·15
54	Magwe ...	8,209	1	0·12	...	...	...	...	...	...	...	...
55	Taungdwingyi ...	8,339	33	3·96	...	...	...	...	...	...	...	...
56	Yenangyaung ...	11,098	11	0·99	3	0·27	...	...	1	0·9	...	...
57	Chauk ...	12,830	5	0·39	...	...	...	...	...	...	1	0·08
58	Pakôkku ...	23,115	16	0·69	...	...	...	...	...	...	2	0·09
MANDALAY DIVISION.												
59	Mandalay ...	134,950	317	2·35	80	0·59	16	0·12	...	...	25	0·19
60	Mandalay Cantonment	12,982	50	3·85	...	...	...	...	...	...	...	...
61	Maymyo ...	16,586	27	1·63	14	0·84	...	...	...	...	...	...
62	Maymyo Cantonment	4,749	2	0·42	...	...	...	...	...	...	...	...
63	Myitngè ...	5,682	4	0·70	...	...	...	...	...	...	...	...
64	Kyauksè ...	7,353	47	6·39	17	2·31	3	0·41	...	...	...	...
65	Meiktila ...	8,830	21	2·38	5	0·57	...	...	...	...	1	0·11
66	Myingyan ...	25,457	26	1·02	17	0·67	10	0·39	...	...	...	...
67	Nyaung-u ...	8,118	3	0·37	2	0·25	1	0·12	...	...	...	...
68	Yamèthin ...	9,291	17	1·83	1	0·11	...	...	...	...	...	...
69	Pyinmana ...	17,656	54	3·06	3	0·17	1	0·06	...	...	...	...
70	Pyawbwè ...	5,783	19	3·29	2	0·35	...	...	...	...	5	0·86
SAGAING DIVISION.												
71	Shwebo ...	11,286	9	0·80	6	0·53	...	...	...	...	1	0·09
72	Ye-u ...	3,739	4	1·07	...	...	...	...	...	...	...	...
73	Sagaing ...	14,127	13	0·92	2	0·14	...	...	...	...	...	...
74	Myinmu ...	5,072	2	0·39	7	1·38	...	...	...	...	...	...
75	Mônywa ...	10,800	50	4·63	1	0·09	...	...	...	...	...	...
Total of Towns, Burma		1,412,601	2,978	2·11	451	0·32	42	0·03	5	0·00	158	0·11
Towns for which corresponding Rural figures are not given in VI-A.												
1	Bhamo ...	8,011	70	8·74	1	0·12	...	...	...	...	...	...
2	Myitkyina ...	7,328	65	8·87	1	0·14	...	...	...	...	...	...
3	Mawlaik ...	2,278	32	14·05	...	...	...	...	...	...	...	...
4	Lashio ...	4,638	82	17·68	...	...	...	...	...	...	...	...
5	Taunggyi ...	8,652	48	5·55	4	0·46	...	...	...	...	1	0·12
6	Kalaw ...	3,621	28	7·73	1	0·28	...	...	...	...	...	...

NOTE.—Column 4, “Relapsing Fever”

Annual Statement VI-B, 1938—contd.

										Dysentery and	
7		8		9		10		11		12	
Cerebrospinal Fever.		Typhus Fever.		Blackwater Fever.		Other Fevers.		Total Fevers.		Dysentery.	
Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
...	...	1	0.05	...	...	123	6.03	272	13.33	11	0.54
2	0.09	...	...	1	0.04	31	1.33	104	4.48	35	1.51
...	14	2.38	39	6.64	2	0.34
...	6	0.77	43	5.51	10	1.28
...
...	43	4.63	68	7.33	6	0.65
1	0.08	2	0.16	...	...	8	0.64	191	15.27	27	2.16
...	19	3.16	4	0.67
...	19	2.86	59	8.87	1	0.15
...	19	2.31	20	2.44	3	0.37
...	1	0.12	34	4.08	3	0.36
...	4	0.36	19	1.71	8	0.72
...	93	7.25	99	7.72	7	0.55
...	19	0.82	37	1.60	14	0.61
...
...	20	0.15	458	3.39	104	0.77
...	33	2.54	83	6.39	3	0.23
1	0.06	1	0.06	...	...	36	2.17	79	4.76	11	0.66
...	1	0.21	3	0.63	5	1.05
...	10	1.76	14	2.46	4	0.70
...	24	3.26	91	12.38	9	1.22
...	7	0.79	34	3.85	7	0.79
...	1	0.04	54	2.12	8	0.31
...	19	2.34	25	3.08	3	0.37
...	4	0.43	22	2.37	3	0.32
...	48	2.72	106	6.00	10	0.57
...	1	0.17	45	7.78	72	12.45	5	0.86
...	2	0.18	...	...	18	1.59	3	0.27
...	16	4.28	20	5.35	2	0.53
...	22	1.56	37	2.62	8	0.57
...	9	1.77	4	0.79
...	4	0.37	55	5.09	4	0.37
51	0.04	7	0.00	6	0.00	2,050	1.45	5,748	4.07	1,212	0.86
...
1	0.12	...	...	1	0.12	2	0.25	75	9.36	10	1.25
1	0.14	...	...	1	0.14	10	1.36	78	10.64	19	2.59
...	1	0.44	13	5.71	46	20.19	3	1.32
...	3	0.65	11	2.37	96	20.17	3	0.65
...	...	1	0.12	1	0.12	12	1.39	67	7.74	10	1.16
...	29	8.01	4	1.10

(Spirochaetal)—no deaths reported.

STATEMENT VI-B (a).—*Supplement*

No.	Divisions and Towns.	Population (Census 1931).	Diarrhœa.		Respiratory Diseases.							
			13		14		15		16		17	
			Diarrhœa.		Pneumonia.		Pulmonary Tuberculosis.		Whooping cough.		Other Respiratory Diseases.	
			Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
TENASSERIM DIVISION —concl'd.												
46	Mergui ...	20,405	10	0·49	47	2·30	49	2·40	...	...	103	5·05
47	Toungoo ...	23,223	42	1·81	47	2·02	31	1·33	1	0·04	16	0·69
48	Shwegyin ...	5,876	6	1·02	27	4·59	17	2·89	...	...	3	0·51
49	Pyu ...	7,807	19	2·43	31	3·97	13	1·67	...	...	2	0·25
MAGWE DIVISION.												
50	Thayetmyo ...	9,279	7	0·75	10	1·08	19	2·05	1	0·11	19	2·05
51	Allanmyo ...	12,511	5	0·40	65	5·20	14	1·12	...	...	11	0·88
52	Minbu ...	6,005	1	0·17	11	1·83	8	1·33	...	...	33	5·50
53	Salin ...	6,654	7	1·05	43	6·46	14	2·10	...	...	16	2·40
54	Magwe ...	8,209	16	1·95	13	1·58	16	1·95	...	...	29	3·53
55	Taungdwingyi ...	8,339	...	...	98	11·75	13	1·56	...	...	21	2·52
56	Yenangyaung ...	11,098	14	1·26	41	3·69	21	1·89	...	...	23	2·07
57	Chauk ...	12,830	2	0·16	14	1·09	12	0·94	...	...	...	...
58	Pakôkku ...	23,115	9	0·39	57	2·47	30	1·30	...	...	190	8·22
MANDALAY DIVISION.												
59	Mandalay ...	134,950	216	1·60	672	4·98	287	2·13	1	0·01	443	3·28
60	Mandalay Cantonment	12,982	5	0·39	18	1·39	4	0·31	...	...	20	1·54
61	Maymyo ...	16,586	33	1·99	75	4·52	47	2·83	...	...	31	1·87
62	Maymyo Cantonment	4,749	3	0·63	9	1·90	...	...	...	...	6	1·26
63	Myitngè ...	5,682	...	...	22	3·87	...	...	...	...	1	0·18
64	Kyauksè ...	7,353	14	1·90	18	2·45	5	0·68	...	...	6	0·82
65	Meiktila ...	8,830	9	1·02	59	6·68	7	0·79	...	...	7	0·79
66	Myingyan ...	25,457	34	1·34	93	3·65	28	1·10	...	...	174	6·84
67	Nyaung-u ...	8,118	...	...	19	2·34	8	0·99	...	...	4	0·49
68	Yamèthin ...	9,291	5	0·54	40	4·31	29	3·12	...	...	3	0·32
69	Pyinmana ...	17,656	29	1·64	70	3·96	26	1·47	...	...	18	1·02
70	Pyawbwè ...	5,783	8	1·38	8	1·38	8	1·38	...	...	6	1·04
SAGAING DIVISION.												
71	Shwebo ...	11,286	14	1·24	39	3·46	11	0·97	...	...	5	0·44
72	Ye-u ...	3,739	4	1·07	9	2·41	1	0·27	...	...	2	0·53
73	Sagaing ...	14,127	8	0·57	11	0·78	41	2·90	...	...	81	5·73
74	Myinmu ...	5,072	...	...	21	4·14	6	1·18	...	...	...	...
75	Mônnya ...	10,800	16	1·48	55	5·09	20	1·85	...	...	61	5·65
Total of Towns, Burma		1,412,601	1,413	1·00	4,685	3·32	2,757	1·95	15	0·01	3,414	2·42
Towns for which corresponding Rural figures are not given in VI-A.												
1	Bhamo ...	8,011	25	3·12	57	7·12	10	1·25	1	0·12	6	0·75
2	Myitkyina ...	7,328	8	1·09	58	7·91	32	4·37	...	...	7	0·96
3	Mawlaik ...	2,278	...	...	9	3·95	5	2·19	...	...	9	3·95
4	Lashio ...	4,638	9	1·94	40	8·62	1	0·22	2	0·43	26	5·61
5	Taunggyi ...	8,652	12	1·39	57	6·59	25	2·89	1	0·12	3	0·35
6	Kalaw ...	3,621	7	1·93	11	3·04	5	1·38	...	...	2	0·55

NOTE.—Column 4, "Relapsing Fever"

10 Annual Statement VI-B, 1938—contd.

Other Causes.															No.
18		19		20		21		22		23		24			
Ber-beri in- cluding Epide- mic Dropsy.		Acute Poliomyelitis.		Diphtheria.		Chicken-pox.		Mumps.		Tuberculosis of Joints.		Other Tuberculous Diseases.			
Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.		
26	1·27	...	...	1	0·05	...	...	...	...	...	...	1	0·05	46
1	0·04	...	...	2	0·09	...	...	...	...	...	...	6	0·26	47
...	...	...	...	...	...	...	...	...	...	...	...	1	0·17	48
2	0·26	...	...	...	...	...	...	...	...	...	...	2	0·26	49
...	...	...	...	...	...	...	...	...	...	...	...	...	...	50
1	0·08	...	...	...	...	...	...	...	...	...	...	...	...	51
...	...	...	...	...	...	...	...	...	...	...	...	...	...	52
...	...	...	...	...	...	...	...	...	...	...	...	...	...	53
...	...	...	...	...	...	1	0·12	...	...	...	...	5	0·61	54
...	...	...	...	...	...	...	...	...	...	...	...	...	...	55
2	0·16	...	...	...	...	1	0·08	...	...	...	...	1	0·09	56
...	...	...	...	...	...	...	...	...	...	...	...	...	...	57
...	...	...	...	...	...	...	...	...	...	...	...	...	...	58
5	0·04	...	...	3	0·02	...	...	1	0·01	1	0·01	29	0·21	59
...	...	...	...	...	...	...	...	...	...	...	...	3	0·23	60
1	0·06	...	...	4	0·24	...	...	...	...	...	...	1	0·06	61
...	...	...	...	2	0·42	...	...	...	...	...	...	...	...	62
...	...	...	...	...	...	...	...	...	...	...	...	...	...	63
4	0·54	...	...	1	0·14	...	...	...	...	...	...	3	0·41	64
...	...	...	...	1	0·11	...	...	...	...	...	...	6	0·68	65
...	...	...	...	...	...	...	...	...	...	1	0·04	5	0·20	66
...	...	...	...	...	...	...	...	...	...	...	...	...	...	67
1	0·11	...	...	...	...	...	...	...	...	...	...	...	...	68
2	0·11	...	...	...	...	...	...	...	...	...	...	3	0·17	69
1	0·17	...	...	...	...	...	...	...	...	1	0·17	...	...	70
...	...	...	...	...	...	...	...	...	...	...	...	...	...	71
...	...	...	...	...	...	...	...	...	...	...	...	...	...	72
...	...	...	...	...	...	...	...	...	...	...	...	...	...	73
...	...	...	...	...	...	...	...	...	...	...	...	...	...	74
...	...	...	...	1	0·09	...	...	...	...	...	...	...	...	75
460	0·33	4	0·00	37	0·03	3	0·00	5	0·00	9	0·01	250	0·18		
3	0·37	...	...	1	0·12	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	10	1·36	2
4	1·76	...	...	...	...	...	...	...	...	...	...	...	...	3
1	0·22	...	...	1	0·22	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	2	0·23	5
...	...	...	...	...	...	...	...	...	...	...	...	...	...	6

(Spiro-chaetal)—no deaths reported.

STATEMENT VI-B (a).—*Supplement to Annual Statement VI-B, 1938*—contd.

No.	Divisions and Towns.	Population (Census 1931).	Other Causes.								Infantile mortality rate per 1,000 births.	
			25		26		27	28				29
			Leprosy.		Cancer.		Deaths from Child-birth.	Deaths under one year.				
			Death.	Ratio.	Death.	Ratio.		Male.	Female.	Total.		
ARAKAN DIVISION.												
1	Akyab ...	38,094	1	0·03	6	0·16	15	108	88	196	241·68	
2	Minbya ...	2,244	...	...	...	...	2	6	5	11	125·00
3	Kyaukpyu ...	4,232	...	...	...	...	...	6	4	10	66·67
4	Sandoway ...	4,070	...	...	1	0·25	2	9	8	17	175·26
PEGU DIVISION.												
5	Rangoon ...	398,967	136	0·34	93	0·23	90	1,698	1,534	3,232	291·46	
6	Rangoon Cantonment	1,448	...	...	...	...	...	1	2	3	500·00
7	Pegu ...	21,626	2	0·09	4	0·18	10	141	112	253	334·21	
8	Nyaunglebin ...	7,790	...	...	3	0·39	8	68	43	111	358·06
9	Tharrawaddy ...	7,131	...	...	1	0·14	...	21	23	44	181·82
10	Thônzè ...	7,962	2	0·25	...	...	2	49	47	96	325·42
11	Zigôn ...	6,365	1	0·16	1	0·16	2	34	23	57	311·48	
12	Letpadan ...	12,160	1	0·08	2	0·16	5	51	34	85	275·97	
13	Gyobingauk ...	7,675	...	...	...	...	1	46	36	82	361·23
14	Minhla ...	4,413	1	0·23	1	0·23	6	19	16	35	241·38	
15	Nattalin ...	5,633	...	...	...	...	3	17	17	34	196·53
16	Syriam ...	15,070	...	...	6	0·40	11	55	46	101	194·61
17	Thôngwa ...	8,976	5	0·56	1	0·11	4	36	40	76	296·88	
18	Insein ...	20,487	1	0·05	3	0·15	8	107	74	181	336·43	
19	Mingaladon Cantonment	3,910	...	...	...	...	...	18	18	36	433·73
20	Thamaing ...	5,645	1	0·18	...	...	1	35	26	61	448·53
21	Kamayut ...	7,256	...	...	1	0·14	7	45	42	87	386·67
22	Thingangyun ...	7,984	...	...	1	0·13	4	20	26	46	302·63
23	Kanbe ...	6,575	...	...	...	...	1	41	31	72	369·23
24	Prome ...	28,295	10	0·35	11	0·39	11	228	220	448	393·33	
25	Shwedaung ...	8,408	2	2·24	...	...	5	74	46	120	428·57
26	Paungdè ...	13,479	1	0·07	...	...	5	41	38	79	221·91
IRRAWADDY DIVISION.												
27	Bassein ...	45,662	11	0·24	5	0·11	23	219	205	424	311·54	
28	Ngathainggyaung ...	5,380	1	0·19	2	0·37	2	27	16	43	247·13	
29	Kyônpyaw ...	5,866	1	0·17	...	...	1	12	6	18	86·12
30	Henzada ...	28,542	6	0·21	5	0·18	10	145	127	272	338·31	
31	Myanaung ...	9,072	2	0·22	2	0·22	2	61	41	102	322·78	
32	Kyangin ...	6,780	...	...	...	...	4	35	29	64	300·47
33	Myaungmya ...	7,773	1	0·13	...	...	6	48	42	90	292·21
34	Wakèma ...	9,359	1	0·11	2	0·21	...	46	37	83	302·92	
35	Moulmeingyun ...	7,747	...	...	...	...	3	43	30	73	274·44
36	Maubin ...	8,897	1	0·11	1	0·11	4	55	51	106	329·19	
37	Yandoon ...	9,925	1	0·10	...	...	...	68	54	122	402·64
38	Danubyu ...	6,334	...	...	...	...	1	38	24	62	260·50
39	Pyapôn ...	12,338	1	0·08	...	...	3	45	44	89	271·34
40	Kyaiklat ...	10,658	1	0·09	2	0·19	3	71	55	126	318·99	
TENASSERIM DIVISION.												
41	Thatôn ...	16,851	2	0·12	1	0·06	11	96	73	169	275·69	
42	Kyaikto ...	6,611	1	0·15	2	0·30	1	33	24	57	314·92	
43	Moulmein ...	65,506	20	0·31	9	0·14	35	288	235	523	273·97	
44	Kawkareik ...	6,575	...	...	...	...	...	44	36	80	284·70
45	Tavoy ...	29,018	...	...	1	0·03	11	115	104	219	226·47

STATEMENT VI-B (a).—*Supplement to Annual Statement VI-B, 1938—concl'd.*

No.	Divisions and Towns.	Population (Census 1931).	Other Causes.								
			25		26		27	28			29
			Leprosy.		Cancer.		Deaths from Child- birth.	Deaths under one year.			Infantile mortality rate per 1,000 births.
			Death.	Ratio.	Death.	Ratio.		Male.	Female.	Total.	
TENASSERIM DIVISION —concl'd.											
46	Mergui ...	20,405	1	0·05	5	0·25	8	80	72	152	182·91
47	Toungoo ...	23,223	...	...	5	0·22	9	46	37	83	119·42
48	Shwegyin ...	5,876	1	0·17	1	0·17	1	22	29	51	260·20
49	Pyu ...	7,807	1	0·13	2	0·26	12	54	49	103	357·64
MAGWE DIVISION.											
50	Thayetmyo ...	9,279	1	0·11	...	...	7	77	70	147	394·10
51	Allanmyo ...	12,511	2	0·16	...	...	3	79	69	148	390·50
52	Minbu ...	6,005	11	1·83	1	0·17	1	26	16	42	170·73
53	Salin ...	6,654	6	0·90	1	0·15	4	42	37	79	348·02
54	Magwe ...	8,209	5	0·61	2	0·24	5	55	37	92	304·64
55	Taungdwingyi ...	8,339	2	0·24	2	0·24	...	111	89	200	478·47
56	Yenangyaung ...	11,098	5	0·45	1	0·09	5	84	66	150	302·42
57	Chauk ...	12,830	...	...	...	...	7	52	51	103	297·69
58	Pakôkku ...	23,115	9	0·39	...	...	11	164	153	317	450·28
MANDALAY DIVISION.											
59	Mandalay ...	134,950	59	0·44	15	0·11	63	953	800	1,753	226·46
60	Mandalay Cantonment	12,982	2	0·15	...	...	4	55	41	96	287·43
61	Maymyo ...	16,586	...	...	5	0·30	8	81	73	154	182·46
62	Maymyo Cantonment	4,749	...	...	...	...	3	10	9	19	133·80
63	Myitngè ...	5,682	...	...	...	...	...	28	17	45	288·46
64	Kyauksè ...	7,353	...	...	...	...	...	68	51	119	395·35
65	Meiktila ...	8,830	...	...	3	0·34	2	70	43	113	292·75
66	Myingyan ...	25,457	11	0·43	...	...	22	245	194	439	404·98
67	Nyaung-u ...	8,118	5	0·62	2	0·25	7	56	46	102	327·97
68	Yamèthin ...	9,291	1	0·11	3	0·32	5	55	50	105	254·24
69	Pyinmana ...	17,656	1	0·06	2	0·11	6	109	87	196	274·89
70	Pyawbwè ...	5,783	1	0·17	2	0·35	8	43	46	89	400·90
SAGAING DIVISION.											
71	Shwebo ...	11,286	5	0·44	3	0·27	8	89	66	155	279·28
72	Ye-u ...	3,739	2	0·53	...	...	1	22	18	40	258·06
73	Sagaing ...	14,127	2	0·14	...	...	4	87	91	178	318·43
74	Myinmu ...	5,072	5	0·99	...	...	3	56	31	87	375·00
75	Mônýwa ...	10,800	1	0·09	3	0·28	4	94	61	155	370·81
Total of Towns, Burma		1,412,601	353	0·25	225	0·16	544	7,476	6,331	13,807	285·92
Towns for which corresponding Rural figures are not given in VI-A.											
1	Bhamo ...	8,011	...	...	1	0·12	1	30	41	71	280·63
2	Myitkyina ...	7,328	1	0·14	3	0·41	2	28	24	52	164·04
3	Mawlaik ...	2,278	...	...	...	...	1	22	10	32	268·91
4	Lashio ...	4,638	...	...	...	...	2	17	19	36	141·73
5	Taunggyi ...	8,652	...	...	...	...	2	50	40	90	216·35
6	Kalaw ...	3,621	...	...	...	...	...	3	6	9	64·29

ANNUAL STATEMENT NO. VII.—Deaths registered from Cholera in the Dis

1	2	3									
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.						
ARAKAN DIVISION.											
1	Akyab ...	10	1	671	2	...	...	1	...	...	...
2	Kyaukpyu ...	6	...	265	...	...	...	...	...	...	...
3	Sandoway ...	5	...	151	...	...	...	...	...	...	...
PEGU DIVISION.											
4	Rangoon ...	2	1	2	1	2	1	...	...	1	1
5	Pegu ...	19	9	410	18	...	...	...	...	5	2
6	Tharrawaddy ...	14	1	457	1	...	...	...	...	1	...
7	Hanthawaddy ...	9	3	459	8	6	...	5	2	...	...
8	Insein ...	10	4	312	10	...	...	...	2	4	3
9	Prome ...	9	1	345	1	...	...	...	...	...	...
IRRAWADDY DIVISION.											
10	Bassein ...	14	4	571	4	...	...	1	1	2	7
11	Henzada ...	9	...	417	...	...	...	...	...	...	...
12	Myaungmya ...	8	3	517	13	1	...	3	7	5	2
13	Maubin ...	7	3	243	3	...	...	...	1	1	1
14	Pyapôn ...	6	2	316	2	...	1	...	...	...	1
TENASSERIM DIVISION.											
15	Thatôn ...	8	2	373	4	...	...	...	1	3	3
16	Amherst ...	10	2	334	2	...	...	...	...	...	3
17	Tavoy ...	6	1	170	1	...	...	2	...	...	...
18	Mergui ...	6	...	139	...	...	...	...	...	...	...
19	Toungoo ...	11	10	534	94	2	1	...	1	...	2
MAGWE DIVISION.											
20	Thayetmyo ...	8	...	501	...	...	...	...	...	...	...
21	Minbu ...	10	1	332	1	...	...	...	...	...	1
22	Magwe ...	10	1	428	1	...	...	...	...	...	...
23	Pakôkku ...	9	...	619	...	...	...	...	...	...	...
MANDALAY DIVISION.											
24	Mandalay ...	11	...	292	...	...	...	...	...	...	...
25	Kyauksè ...	5	1	249	1	...	...	...	...	...	1
26	Meiktila ...	5	...	297	...	...	...	...	...	...	...
27	Myingyan ...	9	2	450	2	...	...	...	...	...	2
28	Yamèthin ...	12	3	381	3	...	...	...	...	...	...
SAGAING DIVISION.											
29	Shwebo ...	10	...	468	...	...	...	...	...	...	...
30	Sagaing ...	8	4	293	6	...	...	...	...	...	7
31	Lower Chindwin ...	8	...	323	...	...	...	...	...	...	...
Total ...		274	59	11,319	178	11	3	12	15	22	36

tricts of Burma during each month of the year 1938.

						6			7			8	1
July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Males.	Females.	Total.	Males.	Females.	Total.		
1	2	...	2	0·01	...	0·00	0·17	1
...	0·23	2
...	0·02	3
...	...	1	1	...	...	6	1	7	0·02	0·01	0·02	0·06	4
5	...	2	...	14	38	31	35	66	0·12	0·15	0·13	0·10	5
...	1	...	1	0·00	...	0·00	0·03	6
...	9	4	13	0·04	0·02	0·03	0·15	7
4	9	4	13	0·05	0·03	0·04	0·09	8
...	1	...	...	...	...	1	...	1	0·00	...	0·00	0·10	9
...	8	3	11	0·03	0·01	0·02	0·36	10
...	0·16	11
1	16	3	19	0·07	0·01	0·04	0·52	12
...	2	1	3	0·01	0·01	0·01	0·54	13
...	2	...	2	0·01	...	0·01	0·70	14
...	7	...	7	0·03	...	0·01	0·29	15
...	1	2	3	0·00	0·01	0·01	0·27	16
...	2	...	2	0·02	...	0·01	0·55	17
...	1·58	18
3	42	131	108	37	67	208	186	394	0·95	0·89	0·92	0·03	19
...	0·18	20
...	1	...	1	0·01	...	0·00	0·01	21
...	1	2	...	3	...	3	0·01	...	0·01	0·25	22
...	0·41	23
...	0·02	24
...	1	1	...	0·01	0·01	...	25
...	0·00	26
6	1	7	8	0·00	0·03	0·02	0·03	27
...	1	6	...	14	...	11	10	21	0·06	0·05	0·05	...	28
...	0·00	29
1	6	2	8	0·04	0·01	0·02	0·07	30
...	0·07	31
21	44	140	110	67	105	327	259	586	0·05	0·04	0·05	0·20	

ANNUAL STATEMENT NO. VIII.—Deaths registered from Small-pox in the

1	2	3		4		5						
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.							
ARAKAN DIVISION.												
1	Akyab ...	10	5	671	55	4	7	4	15	11	8	5
2	Kyaukpyu ...	6	...	265	...	1	...	...	...	...	...	...
3	Sandoway ...	5	...	151	...	...	...	...	...	...	...	...
PEGU DIVISION.												
4	Rangoon ...	2	1	2	1	6	16	21	15	4	3	2
5	Pegu ...	19	6	410	6	...	1	3	3	1	...	1
6	Tharrawaddy ...	14	1	457	1	...	...	...	...	...	1	...
7	Hanthawaddy ...	9	6	459	8	...	6	8	4	3	...	...
8	Insein ...	10	4	312	6	...	...	...	1	1	1	2
9	Proine ...	9	...	345	...	...	...	...	...	...	...	...
IRRAWADDY DIVISION.												
10	Bassein ...	14	1	571	1	...	...	...	...	1	...	...
11	Henzada ...	9	2	417	7	4	3	...	...	...	...	...
12	Myaungmya ...	8	2	517	3	...	2	...	...	...	...	1
13	Maubin ...	7	2	243	6	1	...	...	...	...	1	7
14	Pyapôn ...	6	4	316	7	...	1	...	3	...	...	1
TENASSERIM DIVISION.												
15	Thatôn ...	8	...	373	...	2	...	...	...	...	...	...
16	Amherst ...	10	1	334	1	...	...	...	2	...	...	...
17	Tavoy ...	6	3	170	3	1	...	1	...	1	...	...
18	Mergui ...	6	...	139	...	...	...	...	...	...	...	...
19	Toungoo ...	11	4	534	7	...	...	1	...	...	...	...
MAGWE DIVISION.												
20	Thayetmyo ...	8	...	501	...	...	...	...	...	...	...	...
21	Minbu ...	10	...	332	...	...	...	...	...	...	...	...
22	Magwe ...	10	2	428	3	...	...	...	4	...	1	...
23	Pakôkku ...	9	2	619	2	...	...	...	1	...	...	...
MANDALAY DIVISION.												
24	Mandalay ...	11	...	292	...	...	...	...	...	...	...	...
25	Kyauksè ...	5	...	249	...	...	...	...	...	...	...	...
26	Meiktila ...	5	...	297	...	...	...	...	...	...	...	...
27	Myingyan ...	9	5	450	6	1	...	1	4	6	...	11
28	Yamèthin ...	12	...	381	...	...	...	...	...	...	...	...
SAGAING DIVISION.												
29	Shwebo ...	10	...	468	...	...	...	...	...	...	...	...
30	Sagaing ...	8	...	293	...	...	...	...	...	...	...	...
31	Lower Chindwin ...	8	...	323	...	...	...	...	...	...	...	...
Total ...		274	51	11,319	123	20	36	39	52	28	15	30

Districts of Burma during each month of the year 1938.

					6			7		8			9	1
August.	September.	October.	November.	December.	Total.			Number of these deaths among children		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Males.	Females.	Total.	Under 1 year.	One and under 10 years.	Males.	Females.	Total.		
1	...	1	1	5	32	30	62	...	...	0.09	0.10	0.10	0.09	1
...	1	1	...	...	...	0.01	0.00	0.03	2
...	0.06	3
3	3	...	5	1	36	43	79	12	17	0.13	0.33	0.20	0.15	4
...	6	3	9	2	...	0.02	0.01	0.02	0.05	5
...	1	1	...	...	...	0.00	0.00	0.07	6
...	17	4	21	...	...	0.08	0.02	0.05	0.04	7
...	1	3	3	6	...	2	0.02	0.02	0.02	0.06	8
...	0.05	9
...	1	1	...	...	...	0.00	0.00	0.11	10
...	5	2	7	...	...	0.02	0.01	0.01	0.15	11
...	3	3	...	3	...	0.01	0.01	0.07	12
2	6	5	11	...	1	0.03	0.03	0.03	0.06	13
...	1	1	2	...	6	3	9	...	2	0.03	0.02	0.03	0.09	14
...	2	...	2	...	...	0.01	...	0.00	0.14	15
...	2	...	2	...	1	0.01	...	0.00	0.17	16
...	3	...	3	...	...	0.03	...	0.02	0.02	17
...	0.55	18
...	1	2	...	2	...	...	0.01	...	0.00	0.14	19
...	0.15	20
...	0.09	21
...	4	1	5	...	...	0.02	0.00	0.01	0.07	22
...	1	1	...	...	...	0.00	0.00	0.14	23
...	0.44	24
...	0.10	25
...	0.07	26
...	6	...	...	...	8	21	29	5	8	0.03	0.09	0.06	0.14	27
...	0.03	28
...	0.20	29
...	0.17	30
...	0.05	31
6	10	2	8	8	132	122	254	19	34	0.02	0.02	0.02	0.12	

ANNUAL STATEMENT NO. IX.—Deaths registered from Fevers in the

1	2	3		4							
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths were reported.	Number in each district.	Number from which deaths were reported.						
	ARAKAN DIVISION.										
1	Akyab ...	10	10	671	671	674	525	527	621	642	708
2	Kyaukpyu ...	6	6	265	251	154	127	137	91	115	133
3	Sandoway ...	5	5	151	151	121	131	111	102	96	120
	PEGU DIVISION.										
4	Rangoon ...	2	1	2	1	20	24	32	25	28	17
5	Pegu ...	19	19	410	399	193	198	236	199	279	353
6	Tharrawaddy ...	14	14	457	457	470	449	532	366	274	429
7	Hanthawaddy ...	9	9	459	413	182	134	202	114	115	237
8	Insein ...	10	10	312	192	267	304	277	277	218	199
9	Prome ...	9	9	345	345	357	390	448	252	260	354
	IRRAWADDY DIVISION.										
10	Bassein ...	14	12	571	545	385	238	207	355	213	299
11	Henzada ...	9	9	417	403	450	532	452	364	290	472
12	Myaungmya ...	8	8	517	517	264	175	174	177	160	200
13	Maubin ...	7	7	243	188	517	313	305	234	248	310
14	Pyapôn ...	6	6	316	316	291	180	187	192	213	166
	TENASSERIM DIVISION.										
15	Thatôn ...	8	8	373	373	453	275	273	448	287	281
16	Amherst ...	10	10	334	334	194	164	201	115	143	210
17	Tavoy ...	6	6	170	170	320	232	328	204	190	215
18	Mergui ...	6	6	139	119	98	77	97	69	75	316
19	Toungoo ...	11	11	534	534	307	286	319	213	258	376
	MAGWE DIVISION.										
20	Thayetmyo ...	8	8	501	431	414	400	388	481	392	407
21	Minbu ...	10	10	332	332	416	210	254	243	204	341
22	Magwe ...	10	10	428	428	725	550	651	441	363	425
23	Pakôkku ...	9	9	619	611	564	481	452	443	360	471
	MANDALAY DIVISION.										
24	Mandalay ...	11	11	292	292	253	198	276	187	158	204
25	Kyauksè ...	5	5	249	249	310	164	148	140	131	115
26	Meiktila ...	5	5	297	297	307	103	121	298	107	129
27	Myingyan ...	9	9	450	197	105	128	128	125	118	56
28	Yamèthin ...	12	11	381	334	563	333	347	357	203	291
	SAGAING DIVISION.										
29	Shwebo ...	10	10	468	266	655	485	471	512	339	447
30	Sagaing ...	8	8	293	293	446	372	369	239	213	314
31	Lower Chindwin ...	8	8	323	318	417	313	330	268	238	353
	Total ...	274	270	11,319	10,427	10,892	8,491	8,980	8,152	6,930	8,948

Districts of Burma during each month of the year 1938.

5						6			7			8	9
July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Males.	Females.	Total.	Males.	Females.	Total.		
919	857	726	653	678	718	4,256	3,992	8,248	12.57	13.44	12.98	12.42	1
182	165	124	129	147	161	820	845	1,665	7.61	7.51	7.56	7.20	2
151	127	93	91	136	214	714	779	1,493	11.12	11.98	11.55	11.77	3
30	18	20	19	26	34	246	47	293	0.91	0.36	0.73	0.52	4
280	292	278	251	290	310	1,932	1,227	3,159	7.61	5.20	6.45	4.72	5
454	369	337	439	483	547	2,716	2,433	5,149	10.81	9.56	10.18	8.01	6
138	107	192	211	249	274	1,322	833	2,155	6.04	4.39	5.27	4.87	7
234	217	160	202	226	263	1,663	1,181	2,844	9.47	7.57	8.58	5.95	8
422	421	402	414	613	1,095	2,854	2,574	5,428	14.05	12.41	13.22	11.76	9
373	256	227	442	305	325	2,024	1,601	3,625	6.93	5.74	6.35	6.06	10
645	578	457	579	663	712	3,208	2,986	6,194	10.52	9.61	10.06	6.76	11
296	239	197	442	385	360	1,855	1,214	3,069	7.87	5.81	6.90	5.91	12
333	398	420	525	528	498	2,495	2,134	4,629	13.22	11.68	12.46	8.04	13
210	215	204	219	241	239	1,465	1,092	2,557	8.16	7.06	7.65	6.70	14
1,003	555	445	699	387	422	2,929	2,599	5,528	10.65	10.09	10.38	8.53	15
185	208	191	151	171	245	1,243	935	2,178	4.59	3.81	4.22	4.39	16
315	272	194	230	214	217	1,537	1,394	2,931	16.59	15.96	16.29	15.17	17
178	104	227	165	145	301	1,023	829	1,852	12.00	10.80	11.43	10.75	18
404	368	328	330	357	296	2,154	1,688	3,842	9.79	8.08	8.96	8.45	19
445	427	437	365	429	476	2,623	2,438	5,061	19.35	17.59	18.46	9.04	20
435	386	323	418	518	650	2,224	2,174	4,398	16.27	15.40	15.83	14.24	21
834	567	448	549	592	599	3,404	3,340	6,744	13.57	13.42	13.50	9.35	22
649	693	583	707	661	540	3,299	3,305	6,604	13.68	12.81	13.23	11.04	23
284	275	325	290	307	326	1,698	1,385	3,083	8.86	7.70	8.30	7.52	24
150	165	124	217	291	375	1,244	1,086	2,330	16.61	14.21	15.40	11.92	25
193	124	103	224	141	194	1,103	941	2,044	7.49	5.78	6.59	5.53	26
70	61	63	135	221	171	755	626	1,381	3.30	2.57	2.92	2.79	27
358	264	258	374	432	599	2,382	1,997	4,379	12.26	10.16	11.20	8.50	28
678	728	660	739	1,023	895	3,799	3,833	7,632	17.74	16.48	17.08	16.76	29
389	372	330	345	382	406	2,063	2,114	4,177	12.90	12.01	12.43	7.95	30
398	420	407	421	612	683	2,350	2,510	4,860	13.16	12.25	12.67	10.06	31
11,635	10,248	9,283	10,975	11,853	13,145	63,400	56,132	119,532	10.25	9.48	9.88	8.13	

ANNUAL STATEMENT NO. X.—Deaths registered from Dysentery and

1	2	3		4							
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.						
	ARAKAN DIVISION.										
1	Akyab ...	10	10	671	144	23	30	21	42	42	66
2	Kyaukpyu ...	6	6	265	63	4	3	2	10	13	20
3	Sandoway ...	5	2	151	10	2	...	2	1	...	3
	PEGU DIVISION.										
4	Rangoon ...	2	2	2	2	56	44	33	46	66	81
5	Pegu ...	19	13	410	18	3	7	3	4	5	6
6	Tharrawaddy ...	14	13	457	90	18	12	11	8	14	21
7	Hanthawaddy ...	9	8	459	21	6	2	11	1	5	4
8	Insein ...	10	10	312	49	7	9	6	7	8	14
9	Prome ...	9	9	345	60	3	5	6	3	17	20
	IRRAWADDY DIVISION.										
10	Bassein ...	14	12	571	181	13	18	10	31	32	50
11	Henzada ...	9	9	417	68	23	17	6	18	15	55
12	Myaungmya ...	8	8	517	99	14	8	8	13	22	10
13	Maubin ...	7	7	243	48	7	6	5	5	1	9
14	Pyapôn ...	6	6	316	154	37	26	33	23	34	38
	TENASSERIM DIVISION.										
15	Thatôn ...	8	6	373	23	11	6	6	4	9	15
16	Amherst ...	10	10	334	76	16	20	18	12	20	27
17	Tavoy ...	6	5	170	71	18	7	25	17	16	20
18	Mergui ...	6	6	139	33	6	3	9	7	...	16
19	Toungoo ...	11	11	534	90	11	8	19	7	17	21
	MAGWE DIVISION.										
20	Thayetnyo ...	8	6	501	94	17	15	12	14	10	13
21	Minbu ...	10	10	332	76	9	6	3	5	3	18
22	Magwe ...	10	8	428	23	6	2	4	6	5	13
23	Pakôkku ...	9	9	619	155	13	9	5	10	12	25
	MANDALAY DIVISION.										
24	Mandalay ...	11	11	292	41	35	26	19	22	29	74
25	Kyauksè ...	5	4	249	125	14	6	5	6	5	6
26	Meiktila ...	5	5	297	20	1	1	1	23	4	10
27	Myingyan ...	9	9	450	27	6	6	4	11	4	14
28	Yamèthin ...	12	12	381	51	7	9	9	10	11	19
	SAGAING DIVISION.										
29	Shwebo ...	10	9	468	32	4	2	5	1	9	13
30	Sagaing ...	8	8	293	114	15	9	7	13	8	22
31	Lower Chindwin ...	8	8	323	105	13	11	13	8	22	34
	Total ...	274	252	11,319	2,163	418	333	321	388	458	757

Diarrhœa in the Districts of Burma during each month of the year 1938.

5						6			7			8	9
July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Males.	Females.	Total.	Males.	Females.	Total.		
148	68	39	30	33	27	299	270	569	0·88	0·91	0·90	0·50	1
31	23	7	23	6	...	74	68	142	0·69	0·60	0·64	0·52	2
...	2	1	...	...	...	6	5	11	0·09	0·08	0·09	0·33	3
79	71	53	68	64	59	426	294	720	1·57	2·27	1·80	1·34	4
20	11	8	2	6	6	43	38	81	0·17	0·16	0·17	0·15	5
40	23	17	18	10	26	134	84	218	0·53	0·33	0·43	0·47	6
3	2	2	12	10	5	45	18	63	0·21	0·09	0·15	0·32	7
17	15	9	6	8	7	75	38	113	0·43	0·24	0·34	0·30	8
30	25	27	16	14	14	101	79	180	0·50	0·38	0·44	0·51	9
59	54	36	29	29	22	217	166	383	0·74	0·59	0·67	0·68	10
76	66	26	19	16	11	180	168	348	0·59	0·54	0·57	0·52	11
13	15	17	24	19	30	125	68	193	0·53	0·33	0·43	0·51	12
15	11	10	5	3	6	51	32	83	0·27	0·18	0·22	0·26	13
32	28	20	25	23	28	194	153	347	1·08	0·99	1·04	1·20	14
8	8	11	4	6	3	46	45	91	0·17	0·17	0·17	0·25	15
23	22	19	18	23	18	151	85	236	0·56	0·35	0·46	0·55	16
28	11	7	6	6	12	99	74	173	1·07	0·85	0·96	0·92	17
13	7	7	8	4	7	47	40	87	0·55	0·52	0·54	1·53	18
31	32	56	30	12	11	151	104	255	0·69	0·50	0·59	0·42	19
13	13	16	6	4	4	76	61	137	0·56	0·44	0·50	0·36	20
29	10	15	8	4	4	77	37	114	0·56	0·26	0·41	0·30	21
12	8	5	2	6	7	42	34	76	0·17	0·14	0·15	0·22	22
47	40	26	22	14	17	131	109	240	0·54	0·42	0·48	0·57	23
57	53	33	25	26	26	217	208	425	1·13	1·16	1·14	0·80	24
4	12	3	16	28	42	74	73	147	0·99	0·95	0·97	0·58	25
31	25	4	8	4	2	58	56	114	0·39	0·34	0·37	0·23	26
27	16	9	19	15	21	83	69	152	0·36	0·28	0·32	0·18	27
27	16	9	13	8	5	81	62	143	0·42	0·32	0·37	0·21	28
62	33	15	9	15	4	98	74	172	0·46	0·32	0·38	0·26	29
32	29	10	13	4	11	91	82	173	0·57	0·47	0·51	0·29	30
49	23	12	12	9	8	123	91	214	0·69	0·44	0·56	0·56	31
1,056	772	529	496	429	443	3,615	2,785	6,400	0·58	0·47	0·53	0·48	

ANNUAL STATEMENT NO. XI.—Deaths registered from Respiratory

1	2	3		4							
		Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.						
No.	Divisions and Districts.										
	ARAKAN DIVISION.										
1	Akyab ...	10	10	671	120	61	34	56	52	42	35
2	Kyaukpyu ...	6	6	265	24	5	...	5	2	4	4
3	Sandoway ...	5	3	151	10	3	1	1	...	4	2
	PEGU DIVISION.										
4	Rangoon ...	2	2	2	2	314	280	316	269	300	346
5	Pegu ...	19	6	410	7	23	21	24	20	13	17
6	Tharrawaddy ...	14	14	457	76	29	32	31	25	22	30
7	Hanthawaddy ...	9	6	459	17	19	23	20	12	19	9
8	Insein ...	10	9	312	36	17	28	23	18	13	19
9	Prome ...	9	4	345	5	30	30	36	26	20	29
	IRRAWADDY DIVISION.										
10	Bassein ...	14	12	571	76	49	37	41	48	47	54
11	Henzada ...	9	8	417	12	22	23	26	24	25	20
12	Myaungmya ...	8	8	517	59	20	14	15	17	10	12
13	Maubin ...	7	7	243	56	19	12	19	13	12	15
14	Pyapôn ...	6	6	316	93	22	27	21	22	26	27
	TENASSERIM DIVISION.										
15	Thatôn ...	8	3	373	4	18	10	16	8	12	18
16	Amherst ...	10	10	334	109	48	64	70	28	48	54
17	Tavoy ...	6	4	170	14	17	15	16	12	8	10
18	Mergui ...	6	6	139	26	6	10	17	10	5	17
19	Toungoo ...	11	11	534	41	25	19	21	15	16	18
	MAGWE DIVISION.										
20	Thayetmyo ...	8	6	501	62	26	19	17	21	16	13
21	Minbu ...	10	9	332	81	16	17	18	18	7	15
22	Magwe ...	10	5	428	5	26	20	30	26	19	18
23	Pakôkku ...	9	7	619	24	52	18	26	23	16	25
	MANDALAY DIVISION.										
24	Mandalay ...	11	11	292	31	169	147	164	130	119	137
25	Kyauksè ...	5	4	249	102	15	7	3	2	2	4
26	Meiktila ...	5	4	297	14	11	7	8	12	4	7
27	Myingyan ...	9	7	450	22	28	38	62	32	35	27
28	Yamèthin ...	12	10	381	53	46	32	37	18	31	42
	SAGAING DIVISION.										
29	Shwebo ...	10	3	468	4	6	5	8	6	8	10
30	Sagaing ...	8	8	293	13	18	18	13	12	11	20
31	Lower Chindwin ...	8	8	323	212	115	86	62	73	79	92
	Total ...	274	217	11,319	1,410	1,275	1,094	1,222	994	993	1,146

Diseases in the Districts of Burma during each month of the year 1938.

5						6			7			8	9
July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Males.	Females.	Total.	Males.	Females.	Total.		
58	47	59	46	34	48	357	215	572	1·05	0·72	0·90	1·07	1
18	13	18	21	13	13	71	45	116	0·66	0·40	0·53	0·14	2
3	4	5	1	...	1	14	11	25	0·22	0·17	0·19	0·29	3
316	263	296	324	333	314	2,279	1,392	3,671	8·41	10·76	9·17	8·17	4
28	15	21	24	19	21	143	103	246	0·56	0·44	0·50	0·43	5
25	21	23	43	41	29	196	155	351	0·78	0·61	0·69	0·64	6
13	12	16	13	14	18	116	72	188	0·53	0·38	0·46	0·47	7
25	20	16	22	23	14	139	99	238	0·79	0·63	0·72	0·60	8
39	63	23	37	48	33	230	184	414	1·13	0·89	1·01	0·76	9
57	47	51	49	49	49	333	245	578	1·14	0·88	1·01	0·95	10
26	28	17	31	24	27	172	121	293	0·56	0·39	0·48	0·50	11
22	18	7	33	32	21	145	76	221	0·62	0·36	0·50	0·62	12
14	16	24	22	20	30	124	92	216	0·66	0·50	0·58	0·44	13
18	20	25	28	24	25	142	143	285	0·79	0·92	0·85	1·06	14
16	12	9	15	7	11	97	55	152	0·35	0·21	0·29	0·37	15
47	65	69	61	57	69	404	276	680	1·49	1·12	1·32	1·31	16
14	11	13	17	17	16	108	58	166	1·17	0·66	0·92	0·95	17
17	27	44	30	43	32	125	133	258	1·47	1·73	1·59	0·70	18
26	24	17	25	26	17	144	105	249	0·65	0·50	0·58	0·42	19
20	18	24	5	14	26	127	92	219	0·94	0·66	0·80	0·57	20
19	14	22	30	28	30	132	102	234	0·97	0·72	0·84	0·42	21
30	33	11	26	32	31	166	136	302	0·66	0·55	0·60	0·61	22
26	27	16	20	32	21	176	126	302	0·73	0·49	0·60	0·54	23
158	124	103	117	154	145	952	715	1,667	4·97	3·97	4·49	3·49	24
3	9	2	13	22	48	67	63	130	0·89	0·82	0·86	0·67	25
13	5	7	13	7	4	49	49	98	0·33	0·30	0·32	0·21	26
33	20	39	46	28	29	232	185	417	1·01	0·76	0·88	0·75	27
33	27	19	34	34	16	212	157	369	1·09	0·80	0·94	0·71	28
5	5	2	8	8	6	45	32	77	0·21	0·14	0·17	0·18	29
15	11	11	13	20	10	85	87	172	0·53	0·49	0·51	0·53	30
147	124	138	176	165	134	746	645	1,391	4·18	3·15	3·63	3·95	31
1,284	1,143	1,147	1,343	1,368	1,288	8,328	5,969	14,297	1·35	1·01	1·18	1·07	

ANNUAL STATEMENT NO. XII.—Deaths registered from Plague in the

1	2	3		4							
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.						
ARAKAN DIVISION.											
1	Akyab ...	10	...	671	...	...	...	...	...	...	...
2	Kyaukpyu ...	6	1	265	1	...	...	...	...	...	...
3	Sandoway ...	5	...	151	...	...	...	...	...	...	...
PEGU DIVISION.											
4	Rangoon ...	2	1	2	1	...	3	2	1	...	3
5	Pegu ...	19	5	410	10	6	14	2	...	...	11
6	Tharrawaddy ...	14	6	457	6	27	39	11	1	...	1
7	Hanthawaddy ...	9	1	459	1	2	...	...	...	...	...
8	Insein ...	10	1	312	3	2	...	4	1	...	1
9	Prome ...	9	4	345	4	13	7	3	1	...	...
IRRAWADDY DIVISION											
10	Bassein ...	14	6	571	6	1	2	5	...	8	11
11	Henzada ...	9	1	417	1	...	1	...	...	...	...
12	Myaungmya ...	8	2	517	2	...	...	1	1	1	1
13	Maubin ...	7	4	243	5	6	4	7	2	...	1
14	Pyapôn ...	6	...	316	...	...	...	...	...	...	...
TENASSERIM DIVISION.											
15	Thatôn ...	8	4	373	6	5	1	6	4	1	4
16	Amherst ...	10	...	334	...	...	...	...	...	...	...
17	Tavoy ...	6	...	170	...	...	...	...	...	...	...
18	Mergui ...	6	...	139	...	...	...	...	...	...	...
19	Toungoo ...	11	4	534	4	...	5	15	2	...	6
MAGWE DIVISION.											
20	Thayetmyo ...	8	2	501	2	...	...	...	...	...	...
21	Minbu ...	10	5	332	16	...	7	13	1	1	...
22	Magwe ...	10	9	428	19	26	56	23	3	...	...
23	Pakôkku ...	9	6	619	17	134	171	57	...	...	...
MANDALAY DIVISION.											
24	Mandalay ...	11	6	292	18	210	367	252	19	...	...
25	Kyauksè ...	5	1	249	9	3	6	...	...	...	...
26	Meiktila ...	5	5	297	249	185	252	138	7	1	1
27	Myingyan ...	9	8	450	22	43	88	73	2	...	38
28	Yamèthin ...	12	9	381	22	7	10	1	...	...	...
SAGAING DIVISION.											
29	Shwebo ...	10	3	468	7	...	2	2	1	...	...
30	Sagaing ...	8	3	293	26	40	26	16	6	...	...
31	Lower Chindwin ...	8	3	323	6	1	3	3	...	...	..
Total ...		274	100	11,319	463	711	1,064	634	52	12	78

Districts of Burma during each month of the year 1938.

5						6			7			8	9
						Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
July	August.	September.	October.	November.	December.	Males.	Females.	Total.	Males.	Females.	Total.		
...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	1	1	...	1	0.01	...	0.00	...	2
...	...	...	...	...	...	...	...	...	...	...	...	...	3
1	1	2	...	...	...	13	...	13	0.05	...	0.03	0.04	4
2	...	2	...	...	...	21	16	37	0.08	0.07	0.08	0.08	5
2	...	1	...	1	...	48	35	83	0.19	0.14	0.16	0.17	6
...	...	...	...	...	...	2	...	2	0.01	...	0.00	0.01	7
24	...	...	...	1	2	16	19	35	0.09	0.12	0.11	0.03	8
1	...	1	2	...	1	16	13	29	0.08	0.06	0.07	0.05	9
10	4	5	2	...	...	28	20	48	0.10	0.07	0.08	0.12	10
...	...	...	...	...	...	...	1	1	...	0.00	0.00	0.07	11
...	1	3	...	...	...	8	...	8	0.03	...	0.02	0.03	12
...	1	4	...	...	1	15	11	26	0.08	0.06	0.07	0.02	13
...	...	...	...	...	...	...	...	...	...	...	...	0.00	14
7	3	5	1	...	1	24	14	38	0.09	0.05	0.07	0.22	15
...	...	...	...	...	...	...	...	...	...	...	...	0.01	16
...	...	...	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	...	...	...	...	...	...	...	...	0.00	18
5	3	1	2	...	...	22	17	39	0.10	0.08	0.09	0.10	19
...	...	1	1	...	4	5	1	6	0.04	0.01	0.02	0.01	20
...	3	14	10	16	35	64	36	100	0.47	0.25	0.36	0.05	21
8	15	26	6	16	46	126	99	225	0.50	0.40	0.45	0.23	22
...	7	...	7	54	96	271	255	526	1.12	0.99	1.05	0.07	23
1	2	...	...	1	21	449	424	873	2.34	2.36	2.35	1.13	24
...	...	...	...	...	...	4	5	9	0.05	0.07	0.06	0.10	25
8	51	89	124	191	397	684	760	1,444	4.65	4.67	4.66	0.54	26
8	4	12	39	61	96	291	173	464	1.27	0.71	0.98	0.28	27
15	4	7	17	18	68	71	76	147	0.37	0.39	0.38	0.32	28
...	...	...	...	18	18	28	13	41	0.13	0.06	0.09	0.12	29
5	4	2	3	57	171	160	170	330	1.00	0.97	0.98	0.40	30
...	...	...	...	3	10	6	14	20	0.03	0.07	0.05	0.01	31
97	103	175	214	437	968	2,373	2,172	4,545	0.38	0.37	0.38	0.14	

STATEMENT NO. I (a).—*Showing particulars of Rural Vaccina*

No.	Divisions and Districts.		Population of districts according to Census of 1931.	Average number of Vaccinators employed throughout the year.	Total number of persons.	
(1)	(2)		(3)	(4)	(5)	(6)
	ARAKAN DIVISION.				Male.	Female.
1	Akyab	.. ...	597,242	11	38,642	37,764
2	Arakan Hill Tracts	...	21,418	3	2,486	1,546
3	Kyaukpyu	... ...	216,060	6	8,813	8,629
4	Sandoway	... ...	125,175	3	3,822	2,571
	PEGU DIVISION.					
5	Pegu	... ...	460,395	7	14,955	16,437
6	Tharrawaddy	... ...	454,471	10	20,237	21,215
7	Hanthawaddy	... ..	384,785	8	18,707	23,511
8	Insein	... ...	279,595	5	11,641	12,450
9	Prome	... ...	360,469	8	13,071	13,804
	IRRAWADDY DIVISION.					
10	Bassein	... ...	514,135	11	25,995	28,268
11	Henzada	... ...	571,395	12	24,979	27,932
12	Myaungmya	... ...	419,905	11	23,369	26,779
13	Maubin	... ...	346,353	9	16,360	17,521
14	Pyapôn	... ...	311,162	8	20,329	21,856
	TENASSERIM DIVISION.					
15	Salween	... ...	53,186	4	4,193	2,955
16	Thatôn	... ...	509,166	12	21,216	21,789
17	Amherst	... ...	444,152	8	13,701	12,848
18	Tavoy	... ...	150,946	5	8,176	6,910
19	Mergui	... ...	141,582	6	11,404	10,069
20	Toungoo	... ...	391,922	10	13,746	13,330

* Secondary operations

tions of Burma during the year 1938-39.

vaccinated.	Average number of persons vaccinated by each Vaccinator.	Primary Vaccination.					
		Total.	Successful			Unknown.	No.
			Under one year.	One and under six years.	Total of all ages.		
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(1)
Total.							
76,406	6,946	23,017	3,780	13,306	20,880	2,096	1
4,032	1,344	1,342	12	485	961	380	2
17,442	2,907	10,095	1,594	4,818	8,696	876	3
6,393	2,131	4,017	501	2,196	3,686	303	4
31,392	4,485	19,483	6,943	9,114	18,552	931	5
41,452	4,145	19,874	6,954	11,260	18,926	948	6
42,218	5,277	13,013	3,927	7,252	12,405	541	7
24,091	4,818	* 12,952	3,248	7,482	12,690	90	8
26,875	3,359	20,273	10,900	7,866	19,808	233	9
54,263	4,933	24,616	4,855	13,500	23,238	1,149	10
52,911	4,409	28,375	11,348	13,009	27,804	536	11
50,148	4,559	29,456	4,270	17,700	28,982	474	12
33,881	3,765	15,869	4,399	9,818	15,704	164	13
42,185	5,273	25,165	4,416	15,940	25,165	...	14
7,148	1,787	* 4,138	148	583	2,967	1,094	15
43,005	3,584	18,932	6,147	9,094	17,744	1,140	16
26,549	3,319	16,294	4,157	7,602	15,295	714	17
15,086	3,017	6,333	4,299	2,021	6,323	8	18
21,473	3,579	9,454	724	4,825	9,451	...	19
27,076	2,708	17,579	3,479	10,046	17,133	434	20

included.

STATEMENT NO. I (a).—*Showing particulars of Rural Vaccina*

No.	Divisions and Districts.			Re-vaccination.			Percentage of which the results
				Total.	Successful.	Unknown.	Primary.
(1)	(2)			(14)	(15)	(16)	(17)
	ARAKAN DIVISION.						
1	Akyab	...	...	53,389	7,374	8,328	99·80
2	Arakan Hill Tracts	...	...	2,690	790	1,019	99·90
3	Kyaukpyu	...	...	7,347	2,416	1,379	94·33
4	Sandoway	...	...	2,376	98	459	99·25
	PEGU DIVISION.						
5	Pegu	...	...	11,909	2,045	3,472	100·00
6	Tharrawaddy	...	...	21,578	5,590	3,027	100·00
7	Hanthawaddy	...	...	29,205	9,522	2,407	99·46
8	Insein	...	...	11,141	3,005	487	98·66
9	Prome	...	...	6,602	1,866	430	98·84
	IRRAWADDY DIVISION.						
10	Bassein	...	...	29,647	7,162	7,224	99·02
11	Henzada	...	...	24,536	4,884	2,611	99·87
12	Myaungmya	...	...	20,692	5,134	2,233	100·00
13	Maubin	...	...	18,012	2,377	968	99·99
14	Pyapôn	...	...	17,020	4,241	433	100·00
	TENASSERIM DIVISION.						
15	Salween	...	...	3,028	675	896	97·47
16	Thatôn	...	...	24,073	6,606	4,309	99·73
17	Amherst	...	...	10,255	1,645	1,148	95·71
18	Tavoy	...	...	8,753	6,883	904	99·97
19	Mergui	...	...	12,019	7,807	6	99·97
20	Toungoo	...	...	9,497	705	952	99·93

* Secondary operations.

† The cost in column 20 includes one-third of the pay and allowances.

tions of Burma during the year 1938-39—contd.

successful cases in were known.						
Re-vaccination.	Persons success- fully vaccinated and re-vaccinated per 1,000 of population.	Total cost of Vaccina- tion Department. †	Number of all successful vaccinations and re-vaccinations performed by the Vaccination staff only.	Average cost of each successful case performed by the Vaccination staff.	No	
(18)	(19)	(20)	(21)	(22)	(1)	
		Rs. A. P.		Rs. A. P.		
16·36	47·31	14,001 10 8	28,254	0 7 7	1	
47·28	81·75	1,857 5 3	1,751	1 1 0	2	
40·48	51·43	5,115 10 8	11,112	0 7 4	3	
5·11	30·23	2,788 3 0	3,784	0 11 9	4	
24·24	44·74	11,996 7 0	20,597	0 9 4	5	
30·13	53·94	12,924 4 4	24,516	0 8 5	6	
35·53	56·99	13,666 3 0	21,927	0 10 0	7	
28·21	56·13	7,888 15 0	15,695	0 8 1	8	
30·23	60·13	7,347 13 0	21,674	0 5 5	9	
31·94	59·13	14,121 12 0	30,400	0 7 5	10	
22·28	57·21	13,510 4 0	32,688	0 6 7	11	
27·81	81·25	13,210 3 0	34,116	0 6 2	12	
13·95	52·20	10,750 14 4	18,081	0 9 6	13	
25·57	94·50	10,476 14 0	29,406	0 5 8	14	
31·66	68·48	3,632 11 0	3,642	0 15 11	15	
33·42	47·82	11,378 5 6	24,350	0 7 6	16	
18·06	38·14	7,536 11 2	16,940	0 7 1	17	
87·69	87·49	7,716 2 4	13,206	0 9 4	18	
64·99	121·89	5,815 11 0	17,258	0 5 5	19	
8·25	45·51	10,477 2 0	17,838	0 9 4	20	

included.
of Public Health Inspectors who verified vaccinations.

STATEMENT NO. I (a).—*Showing particulars of Rural Vaccina*

No.	Divisions and Districts.		Population of districts according to Census of 1931.	Average number of Vaccinators employed throughout the year.	Total number of persons	
(1)	(2)		(3)	(4)	(5)	(6)
					Male.	Female.
	MAGWE DIVISION.					
21	Thayetmyo	...	252,387	7	9,357	9,606
22	Minbu	...	265,217	6	5,604	6,132
23	Magwe	...	459,097	7	11,664	11,955
24	Pakôkku	...	476,066	8	11,991	12,294
25	Chin Hills	...	171,237	6	6,185	6,197
	MANDALAY DIVISION.					
26	Mandalay	...	196,687	6	7,781	8,221
27	Kyauksè	...	143,967	4	4,530	4,419
28	Meiktila	...	301,169	4	8,456	8,508
29	Myingyan	...	438,982	10	13,546	13,826
30	Yamèthin	...	358,090	6	10,655	11,469
	SAGAING DIVISION.					
31	Bhamo	...	113,182	4	3,478	3,792
32	Myitkyina	...	164,196	3	3,835	3,908
33	Shwebo	...	431,765	10	14,100	17,334
34	Sagaing	...	316,766	6	9,591	11,072
35	Katha	...	254,170	6	7,515	7,543
36	Upper Chindwin	...	202,704	7	6,819	6,969
37	Lower Chindwin	...	372,634	7	12,795	14,147
	TOTAL OF DISTRICTS		11,671,830	264	463,744	485,576

* Secondary operations

tions of Burma during the year 1938-39—contd.

vaccinated.	Average number of persons vaccinated by each Vaccinator.	Primary Vaccination.					
		Total.	Successful			Unkonwn.	No.
			Under one year,	One and under six years.	Total of all ages.		
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(1)
Total.							
18,963	2,709	* 13,342	3,545	6,172	12,441	664	21
11,736	1,956	* 8,518	3,290	4,516	8,033	400	22
23,619	3,374	13,830	8,237	5,484	13,721	98	23
24,285	3,036	16,745	6,587	8,577	15,880	784	24
12,382	2,064	* 7,342	1,837	4,101	6,642	569	25
16,002	2,667	6,929	1,514	3,164	5,111	1,671	26
8,949	2,237	5,137	2,253	2,649	5,060	77	27
16,964	4,241	9,587	3,208	4,978	8,457	1,118	28
27,372	2,737	* 17,681	8,589	6,704	16,437	1,034	29
22,124	3,687	15,531	4,153	7,259	13,945	1,396	30
7,270	1,818	3,574	513	1,438	2,848	726	31
7,743	2,581	4,447	524	2,121	3,766	528	32
31,434	3,143	16,112	3,881	8,498	13,052	2,887	33
20,663	3,444	10,338	3,660	5,519	9,453	848	34
15,058	2,510	12,317	1,593	7,423	10,590	1,689	35
13,788	1,970	8,562	2,771	3,952	8,246	190	36
26,942	3,849	* 15,473	8,985	5,504	15,212	241	37
949,320	3,596	* 505,742	151,241	255,976	475,304	27,031	

included.

STATEMENT NO. I (a).—*Showing particulars of Rural Vaccina*

No.	Divisions and Districts.			Re-vaccination.			Percentage of which the results
				Total.	Successful.	Unknown.	Primary.
(1)	(2)			(14)	(15)	(16)	(17)
	MAGWE DIVISION.						
21	Thayetmyo	...	...	5,800	2,811	952	98·13
22	Minbu	...	...	3,254	1,022	749	98·95
23	Magwe	...	...	9,789	2,850	524	99·92
24	Pakôkku	...	...	7,540	2,357	710	99·49
25	Chin Hills	...	...	5,043	2,773	280	98·07
	MANDALAY DIVISION.						
26	Mandalay	...	...	9,073	891	2,627	97·20
27	Kyauksè	...	...	3,812	1,099	620	100·00
28	Meiktila	...	...	7,377	982	1,345	99·86
29	Myingyan	...	...	9,884	2,248	783	98·74
30	Yamèthin	...	...	6,593	2,379	1,729	98·66
	SAGAING DIVISION.						
31	Bhamo	...	...	* 3,740	973	2,723	100·00
32	Myitkyina	...	...	3,296	1,841	228	96·10
33	Shwebo	...	...	15,322	4,586	4,476	98·69
34	Sagaing	...	...	10,325	2,209	1,808	99·61
35	Katha	...	...	2,741	876	600	99·64
36	Upper Chindwin	...	...	5,226	3,574	648	98·49
37	Lower Chindwin	...	...	11,471	5,655	1,577	99·87
	TOTAL OF DISTRICTS	...	...	* 444,055	119,951	65,071	99·29

* Secondary operations

† The cost in column 20 includes one-third of the

NATION.

tions of Burma during the year 1938-39—concl'd.

successful cases in were known.					
Re-vaccination.	Persons success- fully vaccinated and re-vaccinated per 1,000 of population.	Total cost of Vaccina- tion Department.†	Number of all successful vaccinations and re-vaccinations performed by the Vaccination staff only.	Average cost of each successful case performed by the Vaccination staff.	No.
(18)	(19)	(20)	(21)	(22)	(1)
		Rs. A. P.		Rs. A. P.	
57·98	60·43	5,966 7 9	15,252	0 6 3	21
40·80	34·14	4,800 10 0	9,055	0 8 6	22
30·76	36·09	7,729 5 0	16,571	0 7 9	23
34·51	38·31	10,952 8 0	18,237	0 9 7	24
58·22	54·98	7,740 2 0	9,415	0 13 2	25
13·82	30·52	8,583 9 0	6,002	1 6 10	26
34·43	42·78	5,515 5 0	6,159	0 14 4	27
16·28	31·34	4,075 1 0	9,439	0 6 10	28
24·70	42·56	11,434 7 2	18,685	0 9 9	29
48·91	45·59	6,326 4 4	16,324	0 6 2	30
95·67	33·76	3,151 0 2	3,821	0 13 2	31
60·01	34·15	3,264 4 6	5,607	0 9 4	32
42·28	40·85	10,380 8 8	17,638	0 9 5	33
25·94	36·82	5,595 3 0	11,662	0 7 8	34
40·92	45·11	10,188 13 0	11,466	0 14 3	35
78·07	58·31	10,116 11 0	11,820	0 13 8	36
57·16	56·00	6,785 6 0	20,867	0 5 2	37
31·65	51·00	309,818 11 10	595,255	0 8 4	

included.
pay and allowances of Public Health Inspectors who verified vaccinations.

STATEMENT NO. I (b)—*Showing particulars of Urban Vaccinations*

No.	Divisions and Towns.			Population of towns according to Census of 1931.	Average number of vaccina- tors employed throughout the year.	Total number of persons	
(1)	(2)			(3)	(4)	(5)	(6)
						Male.	Female.
ARAKAN DIVISION.							
1	Akyab	...	...	38,094	2	6,744	397
2	Minbya	...	...	2,244	1	294	227
3	Kyaukpyu	...	...	4,232	...	235	87
4	Sandoway	...	...	4,070	1	322	222
PEGU DIVISION.							
5	Rangoon	...	...	398,967	21	46,636	17,301
6	Pegu	...	...	21,626	1	2,669	1,991
7	Nyaunglebin	...	...	7,790	1	1,064	685
8	Tharrawaddy	...	...	7,131	...	378	276
9	Thônze	...	...	7,962	1	266	295
10	Zigôn	...	...	6,365	1	209	208
11	Ietpadan	...	...	12,160	1	240	224
12	Gyobingauk	...	...	7,675	1	309	219
13	Minhla	...	...	4,413	1	133	91
14	Nattalin	...	...	5,633	1	168	157
15	Syriam	...	...	15,070	...	4,178	774
16	Thôngwa	...	...	8,976	1	333	266
17	Insein	...	...	20,487	1	1,119	1,171
18	Thamaing	...	...	5,645	1 {	349	365
19	Kamayut	...	...	7,256		735	585
20	Thingangyun	...	...	7,984		296	291
21	Kanbe	...	...	6,575	1 {	395	389
22	Prome	...	...	28,295		2,394	1,851
23	Shwedaung	...	...	8,408	...	418	577
24	Paungdè	...	...	13,479	1	466	480
IRRAWADDY DIVISION.							
25	Bassein	...	...	45,662	3	1,624	1,284
26	Ngathainggyaung	...	...	5,380	...	100	101
27	Kyônpyaw	...	...	5,866	1	217	212

NATION.
(excluding jails and ports) of Burma during the year 1938-39.

vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary Vaccination.				No.
		Total.	Successful.			
			Under one year.	One and under six years.	Total of all ages.	
(7)	(8)	(9)	(10)	(11)	(12)	(1)
Total.						
7,141	3,571	575	433	58	517	1
521	521	108	68	27	108	2
322	...	171	119	37	162	3
544	544	116	83	29	114	4
63,937	3,045	9,795	7,397	1,433	9,148	5
4,660	4,660	891	749	125	883	6
1,749	1,749	351	267	56	336	7
654	...	207	155	52	207	8
561	561	301	140	161	301	9
417	417	204	126	61	202	10
464	464	380	222	144	380	11
528	528	177	154	18	172	12
224	224	136	102	34	136	13
325	325	154	122	32	154	14
4,952	...	534	422	110	532	15
599	599	*256	177	46	242	16
2,290	2,290	966	692	261	953	17
714	} 2,034	153	97	46	153	18
1,320		266	184	73	266	19
587		227	136	91	227	20
784	} 1,371	334	216	111	334	21
4,245		1,119	945	174	1,119	22
995	...	202	170	30	200	23
946	946	838	397	268	779	24
2,908	969	1,011	956	20	976	25
201	...	172	125	37	165	26
429	429	270	148	121	270	27

operations included.

STATEMENT NO. I (b)—Showing particulars of Urban Vaccinations

No.	Divisions and Towns.			Primary Vaccination.	Re-vaccination.		
				Unknown.	Total.	Successful.	Unknown.
(1)	(2)			(13)	(14)	(15)	(16)
ARAKAN DIVISION.							
1	Akyab	...	...	56	6,566	1,340	3,442
2	Minbya	...	...	...	413	16	...
3	Kyaukpyu	...	...	5	151	45	16
4	Sandoway	...	...	2	428	36	56
PEGU DIVISION.							
5	Rangoon	...	...	418	54,142	7,466	8,903
6	Pegu	...	...	4	3,769	2,099	517
7	Nyaunglebin	...	...	15	1,398	466	63
8	Tharrawaddy	...	...	...	447	134	...
9	Thônze	...	...	...	260	35	...
10	Zigôn	...	...	2	213	105	33
11	Letpadan	...	...	...	84	39	2
12	Gyobingauk	...	...	5	351	93	66
13	Minhla	...	...	...	88	52	4
14	Nattalin	...	...	...	171	26	20
15	Syriam	...	...	...	4,418	181	163
16	Thôngwa	...	...	14	344	121	23
17	Insein	...	...	13	1,324	250	63
18	Thamaing	...	...	...	561	235	...
19	Kamayut	...	...	...	1,054	462	...
20	Thingangyun	...	...	...	360	144	1
21	Kanbe	...	...	...	450	161	7
22	Prome	...	...	...	3,126	1,566	207
23	Shwedaung	...	...	...	793	610	43
24	Paungdè	...	...	59	108	33	14
IRRAWADDY DIVISION.							
25	Bassein	...	...	35	1,897	563	405
26	Ngathaingyaung	...	...	2	29	9	3
27	Kyônpyaw	...	...	...	159	81	31

* Secondary opera
† The cost in column 20 includes one-third of the pay and

NATION.

(excluding jails and ports) of Burma during the year 1938-39.

Percentage of successful cases in which the results were known.		Persons success- fully vaccinated per 1,000 of population.	Total cost of Vaccination Department. †	Number of all successful vaccinations and re- vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vaccina- tion staff.	No.
Primary.	Re-vaccination.					
(17)	(18)	(19)	(20)	(21)	(22)	(1)
			Rs. A. P.		Rs. A. P.	
99·61	42·89	48·75	2,783 2 6	1,857	1 8 0	1
100 00	3·87	55·26	324 12 0	124	2 9 11	2
97·59	33·33	48·91	691 11 8	207	3 5 6	3
100·00	9·68	36·86	400 10 6	150	2 10 9	4
97·56	16·50	41·64	34,445 1 7	16,614	2 10 2	5
99·55	64·54	137·89	1,330 10 0	2,982	0 7 2	6
100·00	34·91	102·95	768 14 0	802	0 15 4	7
100·00	29·98	47·82	327 0 8	341	0 15 4	8
100·00	13·46	42·20	436 3 0	336	1 4 9	9
100·00	58·33	48·23	500 8 0	307	1 10 1	10
100·00	47·56	34·46	973 15 0	419	2 5 2	11
100·00	32·63	34·53	447 1 0	265	1 11 0	12
100·00	61·90	42·60	416 4 0	188	2 3 5	13
100·00	17·22	31·95	1,180 10 0	180	6 8 11	14
99·63	4·25	47·31	1,779 5 0	713	2 7 11	15
100·00	37·69	40·44	703 15 0	363	1 15 0	16
100·00	19·83	58·72	1,768 3 0	1,203	1 7 6	17
100·00	41·89	68·73	512 6 0	388	1 5 2	18
100 00	43·83	100·33	676 14 0	728	0 14 11	19
100·00	40·11	46·47	442 8 0	371	1 1 9	20
100·00	36·34	75·29	446 12 0	495	0 14 5	21
100·00	53·65	94·89	1,790 0 8	2,685	0 10 8	22
99 01	81·33	96·34	373 8 0	810	0 7 5	23
100·00	35·11	60·24	1,051 14 0	812	1 4 9	24
100·00	37·73	33·70	1,369 12 0	1,539	0 14 3	25
97·06	34·62	32·34	246 12 0	174	1 6 8	26
100·00	63·28	59·84	841 0 0	351	2 6 4	27

tions included.
allowances of Public Health Inspectors who verified vaccinations.

STATEMENT NO. I (b)—*Showing particulars of Urban Vaccinations*

No.	Divisions and Towns.			Population of towns according to Census of 1931.	Average number of vaccinators employed throughout the year.	Total number of persons	
						(5)	(6)
(1)	(2)			(3)	(4)	Male.	Female.
	IRRAWADDY DIVISION— <i>concl'd.</i>						
28	Henzada	...	...	28,542	1	1,744	1,376
29	Myanaung	...	...	9,072	1	868	884
30	Kyangin	...	...	6,780	1	621	654
31	Myaungmya	...	...	7,773	1	209	264
32	Wakèma	...	...	9,359	1	242	201
33	Moulmeingyun	...	...	7,747	1	319	289
34	Maubin	...	...	8,897	1	1,894	1,040
35	Yandoon	...	...	9,925	1	478	223
36	Danubyu	...	...	6,334	1	712	641
37	Pyapôn	...	...	12,338	1	525	449
38	Kyaiklat	...	...	10,658	1	443	367
	TENASSERIM DIVISION.						
39	Thatôn	...	...	16,851	1	668	421
40	Kyaikto	...	...	6,611	1	284	160
41	Moulmein	...	...	65,506	3	4,743	4,373
42	Kawkareik	...	...	6,575	...	147	138
43	Tavoy	...	...	29,018	2	2,074	2,483
44	Mergui	...	...	20,405	1	1,552	1,242
45	Toungoo	...	...	23,223	1	708	584
46	Shwegyin	...	...	5,876	...	206	126
47	Pyu	...	...	7,807	1	267	310
	MAGWE DIVISION.						
48	Thayetmyo	...	...	9,279	1	435	375
49	Allanmyo	...	...	12,511	1	705	591
50	Minbu	...	...	6,005	1	186	148
51	Salin	...	...	6,654	1	179	169
52	Magwe	...	...	8,209	1	474	210

NATION.

(excluding jails and ports) of Burma during the year 1938-39.

vaccinated. (7)	Average number of persons vaccinated by each vaccinator. (8)	Primary Vaccination.				No. (1)
		Total. (9)	Successful.			
			Under one year. (10)	One and under six years. (11)	Total of all ages. (12)	
Total.						
3,120	3,120	670	664	6	670	28
1,752	1,752	250	241	9	250	29
1,275	1,275	177	153	23	176	30
473	473	338	102	193	338	31
443	443	238	58	151	238	32
608	608	339	154	132	336	33
2,934	2,934	637	517	112	629	34
701	701	318	190	76	311	35
1,353	1,353	434	259	161	431	36
974	974	* 671	300	309	664	37
810	810	468	222	185	458	38
1,089	1,089	546	399	73	488	39
444	444	192	137	43	185	40
9,116	3,039	1,381	1,327	49	1,376	41
285	...	238	225	11	236	42
4,557	2,279	946	880	66	946	43
2,794	2,794	957	514	294	934	44
1,292	1,292	732	563	140	729	45
332	...	155	139	9	150	46
577	577	345	164	119	315	47
810	810	488	389	61	475	48
1,296	1,296	734	286	415	701	49
334	334	292	176	82	258	50
348	348	243	151	92	243	51
684	684	253	179	74	253	52

operations included.

STATEMENT NO. I (b)—Showing particulars of Urban Vaccinations

No.	Divisions and Towns.			Primary Vaccination.	Re-vaccination.		
				Unknown.	Total.	Successful.	Unknown.
(1)	(2)			(13)	(14)	(15)	(16)
IRRAWADDY DIVISION— <i>concl'd.</i>							
28	Henzada	...	...	...	2,450	74	199
29	Myanaung	...	...	...	1,502	325	...
30	Kyangin	...	...	1	1,098	361	4
31	Myaungmya	...	...	...	135	42	...
32	Wakèma	...	...	...	205	17	1
33	Moulmeingyun	...	...	3	269	74	15
34	Maubin	...	...	8	2,297	310	...
35	Yandoon	...	...	7	383	26	21
36	Danubyu	...	...	3	919	123	40
37	Pyapôn	...	...	6	304	66	51
38	Kyaiklat	...	...	10	342	41	20
TENASSERIM DIVISION.							
39	Thatôn	...	...	58	543	219	127
40	Kyaikto	...	...	7	252	143	19
41	Moulmein	...	...	...	7,735	4,176	734
42	Kawkareik	...	...	...	47	15	8
43	Tavoy	...	...	...	3,611	1,794	281
44	Mergui	...	...	17	1,837	918	115
45	Toungoo	...	...	...	560	109	21
46	Shwegyin	...	...	4	177	9	5
47	Pyu	...	...	15	232	88	24
MAGWE DIVISION.							
48	Thayetmyo	...	...	...	322	57	22
49	Allanmyo	...	...	20	562	75	39
50	Minbu	...	...	6	42	16	12
51	Salin	...	...	...	105	22	...
52	Magwe	...	...	...	431	10	28

* Secondary operations
† The cost in column 20 includes one-third of pay and

NATION.

(excluding jails and ports) of Burma during the year 1938-39.

Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population,	Total cost of Vaccination Department. †	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vaccination staff.	No.
Primary.	Re-vaccination.					
(17)	(18)	(19)	(20)	(21)	(22)	(1)
			Rs. A. P.		Rs. A. P.	
100'00	3'29	26'07	1,354 0 0	744	1 13 1	28
100'00	21'64	63'38	1,054 11 0	575	1 13 4	29
100'00	33'00	79'20	813 3 8	537	1 8 3	30
100'00	31'11	48'89	1,246 12 0	380	3 4 6	31
100'00	8'33	27'25	823 6 0	255	3 3 8	32
100'00	29'13	52'92	1,106 8 8	410	2 11 2	33
100'00	13'50	105'54	931 9 0	939	0 15 10	34
100'00	7'18	33'95	725 7 0	337	2 2 5	35
100'00	13'99	87'46	995 3 0	554	1 12 9	36
99'85	26'09	59'17	1,408 8 6	730	1 14 10	37
100'00	12'73	46'82	1,180 4 0	499	2 5 10	38
100'00	52'64	41'96	1,185 5 6	707	1 10 10	39
100'00	61'37	49'61	606 12 0	328	1 13 7	40
99'64	59'65	84'76	3,059 8 0	5,552	0 8 10	41
99'16	38'46	38'17	72 2 0	251	0 4 7	42
100'00	53'87	94'42	1,524 0 0	2,740	0 8 11	43
99'36	53'31	90'76	1,574 6 4	1,852	0 13 7	44
99'59	20'22	36'08	743 10 0	838	0 14 2	45
99'34	5'23	27'06	168 8 0	159	1 0 11	46
95'45	42'31	51'62	625 14 0	403	1 8 10	47
99'58	19'00	57'33	457 15 0	532	0 13 9	48
98'18	14'34	62'03	694 0 0	776	0 14 4	49
90'21	53'33	45'63	1,132 11 0	274	4 2 2	50
100'00	20'95	39'83	264 14 0	265	1 0 0	51
100'00	2'48	32'04	860 2 8	263	3 4 4	52

included.
allowances of Public Health Inspectors who verified vaccinations.

STATEMENT NO. I (b)—Showing particulars of Urban Vaccinations

No.	Divisions and Towns.	Population of towns according to Census of 1931.	Average number of vaccinators employed throughout the year.	Total number of persons	
				(5)	(6)
(1)	(2)	(3)	(4)	Male.	Female.
MAGWE DIVISION—concl'd.					
53	Taungdwingyi	8,339	1	1,435	548
54	Yenangyaung	11,098	1	480	379
55	Chauk	12,830	1	411	369
56	Pakôkku	23,115	1	382	263
MANDALAY DIVISION.					
57	Mandalay	134,950	4	22,164	19,286
58	Maymyo	16,586	1	464	406
59	Myitngè	5,682	...	28	18
60	Kyauksè	7,353	1	247	208
61	Meiktila	8,830	1	425	229
62	Myingyan	25,457	1	469	428
63	Nyaung-U	8,118	1	233	187
64	Yamèthin	9,291	1	420	248
65	Pyinmana	17,656	1	441	363
66	Pyawbwè	5,783	...	268	191
SAGAING DIVISION.					
67	Bhamo	8,011	1	764	260
68	Myitkyina	7,328	1	535	311
69	Shwebo	11,286	1	526	300
70	Ye-U	3,739	...	81	67
71	Sagaing	14,127	1	390	231
72	Myinmu	5,072	1	446	490
73	Mawlaik	2,278	...	343	140
74	Mônýwa	10,800	1	599	389
Total of Towns ...		1,407,129	91	124,525	73,755

* Secondary

NATION.

(excluding jails and ports) of Burma during the year 1938-39.

vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary Vaccination.				No.
		Total.	Successful.			
			Under one year.	One and under six years.	Total of all ages.	
(7)	(8)	(9)	(10)	(11)	(12)	(1)
Total.						
1,983	1,983	346	264	18	335	53
859	859	510	342	168	510	54
780	780	617	319	236	597	55
645	645	437	403	18	435	56
41,450	10,363	* 7,008	6,102	849	6,997	57
870	870	*593	537	36	576	58
46	...	13	13	...	13	59
455	455	260	206	45	254	60
654	654	313	219	94	313	61
897	897	657	554	56	623	62
420	420	231	176	38	220	63
668	668	359	256	78	343	64
804	804	726	465	182	647	65
459	...	196	110	57	184	66
1,024	1,024	239	157	82	239	67
846	846	526	215	144	511	68
826	826	433	376	49	425	69
148	...	122	98	16	115	70
621	621	332	263	60	328	71
936	936	354	334	20	354	72
483	...	110	61	28	96	73
988	988	484	384	70	454	74
198,280	2,179	* 46,822	35,045	8,884	45,395	

operations included.

STATEMENT NO. I (b)—*Showing particulars of Urban Vaccinations*

No.	Divisions and Towns.	Primary Vaccination.	Re-vaccination.		
		Unknown.	Total.	Successful.	Unknown.
(1)	(2)	(13)	(14)	(15)	(16)
	MAGWE DIVISION— <i>concl'd.</i>				
53	Taungdwingyi	11	1,637	329	163
54	Yenangyaung ... ..	...	349	106	6
55	Chauk	18	163	2	3
56	Pakôkku	1	208	7	10
	MANDALAY DIVISION.				
57	Mandalay ... ..	...	34,453	6,780	2,558
58	Maymyo	16	278	63	72
59	Myitngè ... ..	...	33	9	...
60	Kyauksè	1	195	28	6
61	Meiktila ... ..	...	341	56	61
62	Myingyan	34	240	11	57
63	Nyaung-U	11	189	53	136
64	Yamèthin	13	309	36	137
65	Pyinmana	73	78	21	14
66	Pyawbwe	5	263	66	17
	SAGAING DIVISION.				
67	Bhamo ... ..	...	785	235	550
68	Myitkyina	13	320	93	34
69	Shwebo	7	393	239	44
70	Ye-U	3	26	4	4
71	Sagaing	3	289	8	196
72	Myinmu ... ..	...	582	245	93
73	Mawlaik	9	373	118	112
74	Mônýwa	30	504	202	108
	Total of Towns ...	1,054	151,472	34,189	20,249

* Secondary

† The cost in column 20 includes one-third of the pay

NATION

(excluding jails and ports) of Burma during the year 1938-39.

Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Total cost of Vaccination Department. †	Number of all successful vaccinations and re-vaccinations performed by the Vaccination staff only	Average cost of each successful case performed by the Vaccination staff.	No.
Primary.	Re-vaccination.					
(17)	(18)	(19)	(20)	(21)	(22)	(1)
			Rs. A. P.		Rs. A. P.	
100·00	22·32	79·63	512 9 0	664	0 12 4	53
100·00	30·90	55·51	888 5 0	616	1 7 1	54
99·67	1·25	46·69	634 14 0	599	1 0 11	55
99·77	3·54	19·12	716 0 0	442	1 9 11	56
99·84	21·26	102·09	4,929 2 6	13,777	0 5 9	57
99·83	30·58	38·53	1,394 9 0	639	2 2 11	58
100·00	27·27	3·87	123 4 0	22	5 9 8	59
98·07	14·81	38·35	797 8 0	282	2 13 3	60
100·00	20·00	41·79	727 2 0	369	1 15 6	61
100·00	6·01	24·90	959 10 0	634	1 8 3	62
100·00	100·00	33·63	715 15 0	273	2 10 0	63
99·13	20·93	40·79	583 10 0	379	1 8 8	64
99·08	32·81	37·83	802 1 0	668	1 3 3	65
96·34	26·83	43·23	518 0 0	250	2 1 2	66
100·00	100·00	59·17	504 12 0	474	1 1 0	67
99·61	32·52	82·42	860 15 0	604	1 6 10	68
99·77	68·48	58·83	1,159 4 8	664	1 11 11	69
96·64	18·18	31·83	311 8 0	119	2 9 10	70
99·70	8·60	23·78	958 14 0	336	2 13 8	71
100·00	50·10	118·10	393 0 0	599	0 10 6	72
95·05	45·21	93·94	399 11 0	214	1 13 11	73
100·00	51·01	60·74	1,029 0 0	656	1 9 1	74
99·19	26·05	56·56	1,01,558 5 1	79,584	1 4 5	-

operations included.
and allowances of Public Health Inspectors who verified vaccinations.

STATEMENT NO. I (c)—Showing particulars of Vaccinations in different

No.	Areas.	Population according to Census of 1931.	Average number of vaccinators employed throughout the year.	Total number of persons	
(1)	(2)	(3)	(4)	(5)	(6)
	MILITARY CANTONMENTS.			Male.	Female.
1	Rangoon	1,448	...	382	12
2	Mingaladon	3,910	...	795	50
3	Mandalay	12,982	1	222	176
4	Maymyo	4,749	...	107	203
	Total of Cantonments ...	23,089	1	1,506	441
	Total of cases vaccinated by Railway Dispensary Staff.	...	...	837	306
	Total of cases vaccinated by other Dispensary Staff.	...	...	1,530	1,042
	Total of cases vaccinated by Private Medical Practitioners, Licensed Vaccinators, etc.	...	...	956	322
	Cost of Vaccine Dépôt, Meiktila	...	...	...	...
	Cost incurred in the Office of the D.P.H., Burma.	...	...	...	...
	Total of Districts ...	11,671,830	264	463,744	485,576
	Total of Towns ...	1,407,129	91	124,525	73,755
	GRAND TOTAL, BURMA ...	13,102,048	356	593,098	561,442
	FEDERATED SHAN STATES.				
	(a) Districts excluding Towns.				
1	Northern Shan States ...	631,469	21	19,253	17,758
2	Southern Shan States ...	916,718	22	38,674	36,201
	Total of Districts ...	1,548,187	43	57,927	53,959
	(b) Towns.				
1	Lashio	4,638	1	2,184	952
2	Taunggyi	8,652	1	5,685	4,755
3	Kalaw	3,621	...	1,186	1,073
	Total of Towns ...	16,911	2	9,055	6,780
	Vaccination by Railway Dispensary Staff.	...	...	68	51
	Vaccination by other Dispensary Staff.	...	..	1,728	1,459
	Vaccination by Private Medical Practitioners, Licensed Vaccinators, etc.	...	...	201	146
	GRAND TOTAL, SHAN STATES	1,565,098	45	68,979	62,395

* Secondary

NATION.

areas of Burma and States during the year 1938-39.

vaccinated.	Average number of persons vaccinated by each vaccina- tor.	Primary Vaccination.				No.
		Total.	Successful.			
			Under one year.	One and under six years.	Total of all ages.	
(7)	(8)	(9)	(10)	(11)	(12)	(1)
Total.						
394	...	16	16	...	16	1
845	...	66	43	23	66	2
398	398	354	206	147	354	3
310	...	133	59	49	124	4
1,947	1,947	569	324	219	560	
1,143	...	335	113	191	328	
2,572	...	1,868	212	108	364	
1,278	...	160	123	16	143	
...	
...	
949,320	3,596	* 505,742	151,241	255,976	475,304	
198,280	2,179	* 46,822	35,045	8,884	45,395	
1,154,540	3,229	* 555,496	187,058	265,394	522,094	
37,011	1,762	22,604	2,244	12,381	21,775	1
74,875	3,403	43,094	1,539	15,895	32,287	2
111,886	2,602	65,698	3,783	28,276	54,062	
3,136	3,136	323	198	77	322	1
10,440	10,440	977	483	272	881	2
2,259	...	245	108	23	131	3
15,835	7,918	1,545	789	372	1,334	
119	...	31	10	18	31	
3,187	...	1,503	143	871	1,416	
347	...	207	45	70	131	
131,374	2,838	68,984	4,770	29,607	56,974	

operations included.

STATEMENT NO. I (c)—*Showing particulars of Vaccinations in*

No.	Areas.	Primary Vaccination.	Re-vaccination.		
		Unknown.	Total.	Successful.	Unknown.
(1)	(2)	(13)	(14)	(15)	(16)
MILITARY CANTONMENTS.					
1	Rangoon ...	...	378	155	114
2	Mingaladon ...	...	779	661	...
3	Mandalay ...	...	44	1	40
4	Maymyo ...	4	177	16	18
	Total of Cantonments ...	4	1,378	833	172
	Total of cases vaccinated by Railway Dispensary Staff.	4	808	320	42
	Total of cases vaccinated by other Dispensary Staff.	1,503	704	110	288
	Total of cases vaccinated by Private Medical Practitioners, Licensed Vaccinators, etc.	14	1,118	137	764
	Cost of Vaccine Depôt, Meiktila	...	...	...	...
	Cost incurred in the Office of the D.P.H., Burma.	...	...	...	...
	Total of Districts ...	27,031	* 444,055	119,951	65,071
	Total of Towns ...	1,054	151,472	34,189	20,249
	GRAND TOTAL, BURMA ...	29,610	* 599,535	155,540	86,586
FEDERATED SHAN STATES.					
<i>(a) Districts excluding Towns.</i>					
1	Northern Shan States ...	410	14,407	9,605	337
2	Southern Shan States ...	10,646	31,781	11,077	5,281
	Total of Districts ...	11,056	46,188	20,682	5,618
<i>(b) Towns.</i>					
1	Lashio ...	1	2,813	1,060	317
2	Taunggyi ...	96	9,463	3,124	2,515
3	Kalaw ...	113	2,014	49	1,616
	Total of Towns ...	210	14,290	4,233	4,448
	Vaccination by Railway Dis- pensary Staff.	...	88	10	...
	Vaccination by other Dispen- sary Staff.	67	1,684	567	571
	Vaccination by Private Medical Practitioners, Licensed Vac- cinators, etc.	76	140	25	51
	GRAND TOTAL, SHAN STATES	11,409	62,390	25,517	10,688

* Secondary

† The cost in column 20 includes one-third of the pay and

NATION.

different areas of Burma and States during the year 1938-39.

Percentage of successful cases in which the results were known.		Persons successfully vaccinated and re-vaccinated per 1,000 of population.	Total cost of Vaccination Department. †	Number of all successful vaccinations and revaccinations performed by the Vaccination staff only.	Average cost of each successful case performed by the Vaccination staff.	No.
Primary.	Re-vaccination.					
(17)	(18)	(19)	(20)	(21)	(22)	(1)
			Rs. A. P.		Rs. A. P.	
100·00	58·71	118·09	...	171	...	1
100·00	84·85	185·93	...	727	...	2
100·00	25·00	27·35	542 0 0	355	1 8 5	3
96·12	10·06	29·48	...	140	...	4
99·12	69·07	60·33	542 0 0	1,393	0 6 3	
99·09	41·78	...	...	...	...
99·73	26·44	...	...	...	...
97·95	38·70	...	...	...	...
...	...	...	32,247 1 3	...	...
...	...	...	106 8 6	...	...
99·29	31·65	51·00	3,09,818 11 10	595,255	0 8 4	
99·19	26·05	56·56	1,01,558 5 1	79,584	1 4 5	
99·28	30·32	51·71	4,44,272 10 8	676,232	0 10 6	
98·11	68·27	49·69	13,044 9 0	31,380	0 6 8	1
99·50	41·80	47·30	18,726 3 4	43,364	0 6 11	2
98·94	50·98	48·28	31,770 12 4	74,744	0 6 10	
100·00	42·47	297·97	545 2 0	1,382	0 6 4	1
100·00	44·96	462·90	716 1 6	4,005	0 2 10	2
99·24	12·31	49·71	120 6 0	180	0 10 8	3
99·93	43·01	329·19	1,281 9 6	5,567	0 3 8	
100·00	11·36	...	...	...	...
98·61	50·94	...	...	...	...
100·00	28·09	...	...	...	...
98·96	49·35	52·71	33,052 5 10	80,311	0 6 7	

operations included.
allowances of Public Health Inspectors who verified vaccinations.

VACCI
SUM

(1)	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which results were known.	
	Primary. (2)	Re-vacci- nation. (3)	Primary. (4)	Re-vacci- nation. (5)	Primary. (6)	Re-vacci- nation. (7)
<i>Vaccination.</i>						
1. By Special Staff—						
(a) Districts (excluding towns)	505,309	444,011	505,742	444,055	99·29	31·65
(b) Towns ...	46,808	151,472	46,822	151,472	99·19	26·05
Total ...	552,117	595,483	552,564	595,527	99·28	30·21
2. By Railway Dispensary Staff	335	808	335	808	99·09	41·78
3. By other Dispensary Staff ...	1,868	704	1,868	704	99·73	26·44
4. By Private Medical Practitioners, Licensed Vaccinators, etc.	160	1,118	160	1,118	97·95	38·70
5. By Cantonment Staff ...	569	1,378	569	1,378	99·12	69·07
6. Cost of Vaccine Dépôt, Meiktila	...	...	...	...	...	...
7. Cost incurred in the office of Director of Public Health, Burma.	...	...	...	...	...	...
GRAND TOTAL, BURMA ...	555,049	599,491	555,496	599,535	99·28	30·32
Shan States ...	67,243	60,478	67,243	60,478	98·96	49·42
By Railway Dispensary Staff ...	31	88	31	88	100·00	11·36
By other Dispensary Staff ...	1,503	1,684	1,503	1,684	98·61	50·94
By Private Medical Practitioners, Licensed Vaccinators, etc.	207	140	207	140	100·00	28·09
Shan States, Total ...	68,984	62,390	68,984	62,390	98·96	49·35

NATION.
MARY.

Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccination per 1,000 population.	Total cost of Department.	Number of all successful vaccinations performed.	Average cost of each successful case.
Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One year and under six years.				
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
					Rs. A. P.		Rs. A. P.
264	3,596	151,241	255,976	51'00	3,09,818 11 10	595,255	0 8 4
91	2,179	35,045	8,884	56'56	1,01,558 5 1	79,584	1 4 5
355	3,233	186,286	264,860	51'60	4,11,377 0 11	674,839	0 9 9
...	...	113	191	...	...	...	...
...	...	212	108	...	...	...	...
...	...	123	16	...	...	...	...
1	1,947	324	219	60'33	542 0 0	1,393	0 6 3
...	...	...	...	...	32,247 1 3	...	...
...	...	...	...	...	106 8 6	...	...
356	3,229	187,058	265,394	51'71	4,44,272 10 8	676,232	0 10 6
45	2,838	4,572	28,648	51'31	33,052 5 10	80,311	0 6 7
...	...	10	18	...	...	...	...
...	...	143	871	...	...	...	...
...	...	45	70	...	...	...	...
45	2,838	4,770	29,607	52'71	33,052 5 10	80,311	0 6 7

COMPARATIVE STATEMENT NO. II.—*Showing the number of persons vaccinated in the Province of Burma in*

Establishments.	Persons prima									
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.
	1929-30.		1930-31.		1931-32.		1932-33.		1933-34.	
(1)	(2)		(3)		(4)		(5)		(6)	
Government.	10,972	7,444	9,581	7,766	9,335	7,566	12,707	8,769	12,912	9,950
Municipal	49,272	45,680	48,013	44,130	57,174	52,211	59,848	54,675	60,027	56,010
Local Funds.	504,704	469,318	492,893	458,389	469,598	436,335	557,582	507,654	556,858	499,306
Dispensary	4,863	1,819	3,810	546	2,660	1,200	2,020	420	2,838	906
Other Agencies.	665	371	220	200	736	711	3,535	1,150	217	181
Total ...	504,776	524,632	554,517	511,031	539,503	498,023	635,692	572,668	632,852	566,353
Federated Shan States.	57,508	50,481	59,680	53,997	65,080	58,775	87,668	70,225	70,834	60,740

NATION.

primarily vaccinated and the number of those persons who were successfully each of the undermentioned official years.

rily vaccinated.

Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Total number.	Number success- fully vacci- nated.	Establish- ments.
1934-35. (7)		1935-36. (8)		1936-37. (9)		1937-38. (10)		1938-39. (11)		(12)
37,308	26,523	22,799	18,439	12,612	10,311	13,739	11,799	12,770	11,720	Government.
55,986	52,335	53,398	48,657	54,630	52,281	52,786	50,644	46,803	45,395	Municipal.
523,635	474,423	520,013	481,150	572,489	528,693	535,585	487,813	493,108	464,144	Local Funds.
1,477	557	2,064	1,110	2,501	650	2,243	914	2,203	692	Dispen- sary.
1,369	1,107	198	184	180	170	250	158	160	143	Other Agen- cies.
619,775	554,945	598,472	549,540	642,412	592,105	604,603	551,328	555,049	522,094	Total.
58,025	48,504	56,076	51,848	60,709	51,813	71,971	54,834	68,984	56,974	Federated Shan States.

STATEMENT NO. III.—*Showing receipts of the Vaccine*

Item No.	Particulars.	April.	May.	June.	July.	August.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	<i>Sale Proceeds of Vaccine Lymph—</i>					
	(a) Received at other Treasuries	5,156 8 0	1,676 2 0	7,219 8 0	3,358 11 0	3,259 11 0
	(b) Credited in cash at Meiktila Treasury by the Vaccine Depôt.	11 14 0	13 6 0	...	...	...
2	<i>Miscellaneous—</i>					
	(a) Sale of Vaccinated Calves	...	...	...	...	...
	(b) Sale of Rabbits	...	...	...	...	...
	(c) Sale of Miscellaneous	...	...	...	...	...
3	Value of Vaccine lymph supplied free to Government Institutions.	226 3 0	210 5 0	183 8 0	174 4 0	184 14 0
4	Recoveries of overpayments	...	...	...	...	...
	Total	5,394 9 0	1,899 13 0	7,403 0 0	3,532 15 0	3,444 9 0

NATION.

Depôt, Meiktila, during the year 1938-39.

September.	October.	November.	December.	January.	February.	March.	Total.	Item. No.
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(1)
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	1
6,334 8 0	5,017 8 0	608 7 0	4,717 2 0	3,597 7 0	3,048 10 0	10,180 9 0	54,174 11 0	
20 0 0	0 4 0	13 0 0	143 1 0	102 8 0	101 9 0	32 4 0	437 14 0	
...	...	...	...	...	...	...	...	2
...	
...	...	...	...	5 0 0	7 0 0	...	12 0 0	
174 4 0	157 10 0	179 6 0	167 10 0	168 5 0	164 12 0	182 2 0	2,173 3 0	3
...	...	...	...	...	3 9 0	...	3 9 0	4
6,528 12 0	5,175 6 0	800 13 0	5,027 13 0	3,873 4 0	3,325 8 0	10,394 15 0	56,801 5 0	

STATEMENT NO. IV.—Showing expenditure of the Vaccine.

Item No.	Particulars.	April.	May.	June.	July.	August.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	Pay of Officer—Director—					
	(a) Pay ...	1,120 0 0	635 0 0	431 10 0	1,120 0 0	1,120 0 0
	(b) Leave allowance	...	560 0 0	794 13 0	...	...
2	Pay of Establishment—Permanent—					
	(a) Assistant Director	104 0 0	104 0 0	104 0 0	104 0 0	104 0 0
	(b) Clerks	158 0 0	158 0 0	158 0 0	158 0 0	158 0 0
	(c) Head Loader	30 0 0	30 0 0	30 0 0	30 0 0	28 0 0
	(d) Laboratory attendant and media maker.	35 0 0	35 0 0	35 0 0	35 0 0	35 0 0
3	Allowances, Honoraria, etc.—Fixed—					
	(a) Compensatory allowance of Director.	90 0 0	45 0 0	26 2 0	90 0 0	90 0 0
	(b) Pension contribution of Director.	186 11 0	93 6 0	54 3 0	186 11 0	186 11 0
	(c) Compensatory allowance of of Assistant Director.	16 0 0	16 0 0	11 6 0	15 7 0	16 0 0
4	Contingencies—					
	(a) Hire of calves for lymph	...	116 0 0	...	121 0 0	72 0 0
	(b) Medicines and instruments	1 0 0	...	7 6 0	...	0 4 0
	(c) Feeding charges	32 7 6	43 10 0	33 5 0	53 3 0	34 7 0
	(d) Pay of inferior servants	235 0 0	235 0 0	235 0 0	242 0 0	237 6 0
	(e) Books, maps and publications	...	...	...	...	...
	(f) Postage and telegrams	95 1 0	95 0 6	95 9 0	95 0 0	95 0 9
	(g) Rents, rates and taxes	...	...	...	226 10 0	...
	(h) Furniture, apparatus and office requisites.	...	...	...	23 1 0	6 11 0
	(i) Transport	13 12 0	17 1 0	13 14 0	24 7 0	9 15 0
	(j) Unclassified :—					
	(1) Purchase and repair of tools and plant.	4 0 0	...	...	29 6 0	14 0 0
	(2) Other office expenses and miscellaneous.	119 6 0	150 14 0	173 2 0	225 4 0	103 12 0
	(k) Petty construction and repairs	...	3 0 0	...	42 0 0	21 0 0
	(l) Newspapers and periodicals	...	...	13 11 0	...	...
	Total	2,240 5 6	2,336 15 6	2,217 1 0	2,821 1 0	2,332 2 9

NATION.

Depôt, Meiktila during the year 1938-39.

September.	October.	November.	December.	January.	February.	March.	Total.	Item No.
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(1)
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
1,120 0 0	1,120 0 0	1,120 0 0	1,120 0 0	1,120 0 0	1,120 0 0	1,120 0 0	12,266 10 0	1
...	...	...	...	...	...	...	1,354 13 0	
104 0 0	104 0 0	104 0 0	104 0 0	104 0 0	104 0 0	104 0 0	1,248 0 0	2
158 0 0	158 0 0	158 0 0	158 0 0	158 0 0	158 0 0	158 0 0	1,896 0 0	
30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	30 0 0	358 0 0	
35 0 0	35 0 0	35 11 0	36 0 0	36 0 0	36 0 0	36 0 0	424 11 0	
90 0 0	90 0 0	90 0 0	90 0 0	90 0 0	90 0 0	90 0 0	971 2 0	3
186 11 0	186 11 0	186 11 0	186 11 0	186 11 0	186 11 0	186 11 0	2,014 7 0	
16 0 0	16 0 0	16 0 0	16 0 0	16 0 0	16 0 0	16 0 0	186 13 0	
58 0 0	58 0 0	174 0 0	174 0 0	116 0 0	94 0 0	268 0 0	1,251 0 0	4
2 0 0	1 7 0	0 10 0	82 0 0	...	1 4 0	1,503 4 6	1,599 3 6	
62 0 0	35 2 0	54 5 0	42 1 0	47 15 0	42 6 0	54 5 0	535 2 6	
234 5 0	234 8 0	234 8 0	229 0 0	234 8 0	241 12 0	234 8 0	2,827 7 0	
95 1 6	95 0 6	95 1 3	95 2 0	95 3 9	95 1 6	110 1 6	1,156 7 3	
12 0 0	...	...	...	21 6 0	...	...	226 10 0	
21 5 0	8 6 0	26 6 0	12 5 0	13 9 0	16 1 0	24 13 0	201 14 0	
4 0 0	4 15 0	13 15 0	24 3 0	...	6 6 0	21 7 0	122 4 0	
196 4 0	106 11 0	248 2 0	75 12 0	355 1 0	333 4 0	312 0 0	2,399 8 0	
52 4 0	5 0 0	150 0 0	...	...	...	857 0 0	1,130 4 0	
...	...	...	...	...	...	...	13 11 0	
2,476 14 6	2,288 12 6	2,737 5 3	2,475 2 0	2,624 5 9	2,570 13 6	5,126 2 0	32,247 1 3	

VACCINATION.

APPENDIX A.—Statement showing the ratio per 10,000 successfully vaccinated and the mortality from Small-pox by Quinquennial periods.

Official Year.		Ratio per 10,000 successfully vaccinated.	Quinquennial mean.	Calendar Year.		Ratio per 10,000 of mortality from small-pox.	Quinquennial mean.
(1)		(2)	(3)	(4)		(5)	(6)
BURMA.							
1923-24	...	475.39	463.07	1923	...	2.63	2.45
1924-25	...	485.25		1924	...	2.31	
1925-26	...	479.86		1925	...	3.56	
1926-27	...	420.72		1926	...	2.16	
1927-28	...	454.15	500.12	1927	...	1.57	1.51
1928-29	...	505.39		1928	...	2.61	
1929-30	...	520.93		1929	...	1.70	
1930-31	...	495.10		1930	...	0.85	
1931-32	...	441.96	587.89	1931	...	0.40	1.17
1932-33	...	539.16		1932	...	2.05	
1933-34	...	542.19		1933	...	1.24	
1934-35	...	556.26		1934	...	1.32	
1935-36	...	583.18	..	1935	...	1.04	
1936-37	...	651.89		1936	...	1.12	
1937-38	...	605.94		1937	...	1.13	
1938-39	...	517.20		1938	...	0.21	
FEDERATED SHAN STATES.							
1923-24	...	303.97	352.59				
1924-25	...	314.93					
1925-26	...	457.27					
1926-27	...	298.85					
1927-28	...	387.93	457.93				
1928-29	...	440.45					
1929-30	...	468.45					
1930-31	...	415.41					
1931-32	...	430.09	423.55				
1932-33	...	532.25					
1933-34	...	498.82					
1934-35	...	370.13					
1935-36	...	408.34	...				
1936-37	...	399.59					
1937-38	...	440.85					
1938-39	...	527.07					

NOTE.—This includes primary and re-vaccination successful cases.

VACCINATION.

APPENDIX B.—Statement showing the number of vaccinations performed in Municipal Towns and Notified Areas (to which the Vaccination Act has been extended) on children under one year of age.

Towns.		Number of births during the year 1938-39.	Number of deaths among children under one year during the year.	Number of successful operations on children under one year during the year ending 31st March 1939.	Date of extension of Vaccination Act of 1880.	Date of extension of Vaccination Law Amendment Act of 1909.
(1)		(2)	(3)	(4)	(5)	(6)
Akyab	...	785	191	433	August 1883	29th March 1910.
Minbya	...	89	14	68	4th March 1930...	9th Sept. 1931.
Kyaukpyu	...	148	14	119	April 1894	29th March 1910.
Sadoway	...	93	19	83	September 1890	Do.
Rangoon *	...	10,887	3,260	7,532	April 1884	1st May 1909.
Pegu	...	786	252	755	March 1893	29th March 1910.
Nyaunglèbin	...	298	119	267	29th March 1910	Do.
Tharrawaddy	...	235	46	155	October 1897.	23rd July 1929.
Thônzè	...	295	96	140	Do.	29th March 1910.
Zigôn	...	196	57	126	11th May 1914	9th Sept. 1915.
Letpadan	...	298	79	222	January 1897	29th March 1910.
Gyobingauk	...	233	80	154	February 1897	Do.
Minhla	...	137	31	102	11th May 1914	9th Sept. 1915.
Nattalin	...	164	34	122	Do.	Do.
Syriam	...	497	103	422	29th January 1913	29th January 1913.
Thôngwa	...	248	72	177	3rd March 1914	3rd March 1914.
Insein	...	525	190	735	14th March 1912	14th March 1912.
Thamaing	...	144	76	97	26th May 1926	26th May 1926.
Thingangyun	...	147	53	136	Do.	Do.
Kanbe	...	184	78	216	Do.	Do.
Kamayut	...	253	94	184	Do.	Do.
Prome	...	1,123	593	945	June 1890	29th March 1910.
Shwedaung	...	280	118	170	10th Sept. 1917	23rd July 1929.
Paungdè	...	352	70	397	August 1890	29th March 1910.
Bassein	...	1,354	337	957	September 1888	Do.
Ngathainggyaung	...	171	48	125	February 1890	Do.
Kyônpyaw	...	198	23	148	26th Dec. 1923	23rd July 1929.
Henzada	...	811	150	664	January 1889	29th March 1910.
Myanaung	...	318	101	241	July 1889	Do.
Kyangin	...	228	49	153	August 1894	Do.
Myaungmya	...	298	82	102	June 1894	Do.
Wakèma	...	255	80	58	27th April 1907	Do.
Moulmeingyun	...	258	82	154	20th July 1925	20th July 1925
Maubin	...	253	87	517	October 1891	29th March 1910.

* Includes Cantonment.

VACCINATION.

APPENDIX B.—Statement showing the number of vaccinations performed in Municipal Towns and Notified Areas (to which the Vaccination Act has been extended) on children under one year of age.—concl'd.

Towns.		Number of births during the year 1938-39.	Number of deaths among children under one year during the year.	Number of successful operations on children under one year during the year ending 31st March 1939.	Date of extension of Vaccination Act of 1880.	Date of extension of Vaccination Law Amendment Act of 1909.
(1)		(2)	(3)	(4)	(5)	(6)
Yandoon	...	308	114	190	January 1892 ...	29th March 1910.
Danubyu	...	232	74	259	9th July 1909 ...	23rd July 1929.
Pyapôn	...	345	92	300	November 1904	29th March 1910.
Kyaiklat	...	392	135	222	15th Dec. 1904 ...	Do.
Thatôn	...	632	151	399	October 1891 ...	Do.
Kyaikto	...	185	50	137	March 1897 ...	Do.
Moulmein	...	1,881	511	1,327	August 1885 ...	Do.
Kawkareik	...	287	77	225	September 1914	17th Sept. 1914.
Tavoy	...	1,021	216	880	December 1889	29th March 1910.
Mergui	...	790	131	514	October 1891 ...	Do.
Toungoo	...	710	94	572	May 1889 ...	Do.
Shwegyin	...	199	56	139	January 1890 ...	Do.
Pyu	...	297	82	164	January 1920 ...	17th January 1920.
Thayermyo	...	394	149	389	May 1889 ...	29th March 1910.
Allanmyo	...	390	145	286	May 1901 ...	Do.
Minbu	...	246	47	176	March 1896 ...	Do.
Salin	...	239	76	151	Do. ...	Do.
Magwe	...	297	96	179	10th March 1913	10th March 1913.
Taungdwingyi	...	440	205	264	February 1893 ...	29th March 1910.
Yenangyaung	...	515	145	342	10th March 1913	10th March 1913.
Chauk	...	382	112	322	20th May 1929 ...	23rd July 1929.
Pakôkku	...	721	321	403	April 1892 ...	29th March 1910.
Mandalay *	...	7,962	1,761	6,323	August 1891 ...	Do.
Maymyo *	...	1,007	188	605	October 1912 ...	22nd October 1912.
Myitngè	...	141	35	13	4th June 1930 ...	4th June 1930.
Kyauksè	...	301	119	206	May 1894 ...	29th March 1910.
Meiktila	...	386	100	226	June 1906 ...	31st July 1922.
Myingyan	...	1,063	410	554	September 1891	29th March 1910.
Nyaung-u	...	277	105	176	30th August 1921	30th August 1921.
Yamèthin	...	428	108	258	February 1892 ...	29th March 1910.
Pyinmana	...	716	188	466	November 1891...	Do.
Pyawbwè	...	223	77	110	May 1912 ...	23rd July 1929.
Bhamo	...	260	66	157	26th October 1894	29th March 1910.
Myitkyina	...	327	58	215	6th May 1929 ...	23rd July 1929.
Shwebo	...	573	184	376	June 1894 ...	29th March 1910.
Ye-u	...	153	35	98	2nd April 1929 ...	23rd July 1929.
Sagaing	...	548	164	263	April 1894 ...	29th March 1910.
Myinmu	...	224	85	334	5th October 1926	5th October 1926.
Mawlaik	...	113	31	61	31st Dec. 1930	31st Dec. 1930.
Mônywa	...	393	134	384	March 1893 ...	29th March 1910.
Total	...	48,539	13,705	35,541 †		
FEDERATED SHAN STATES.						
Lashio	...	266	42	198	25th July 1927 ...	25th July 1927.
Kalaw	...	139	6	108	Do. ...	Do.
Taunggyi	...	407	76	483	Do. ...	Do.
Total	...	812	124	789		

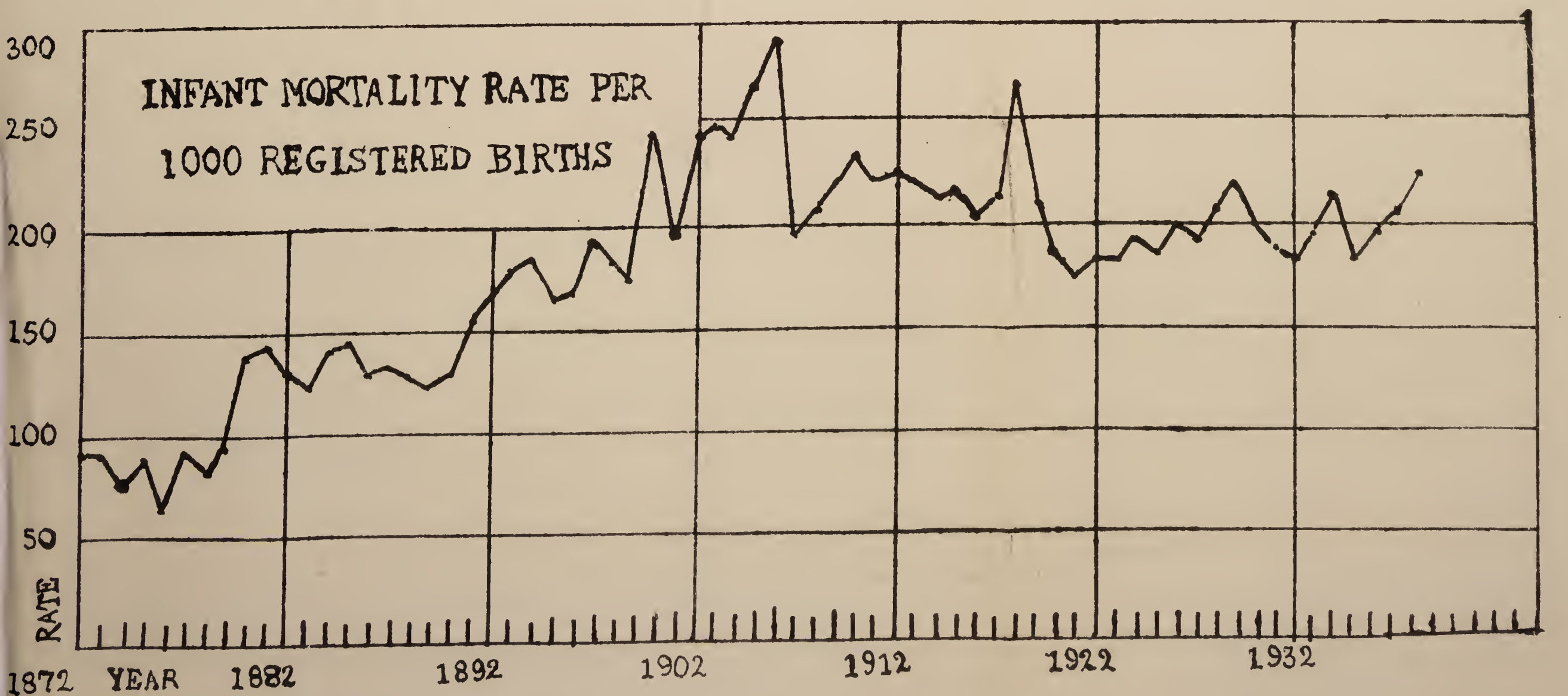
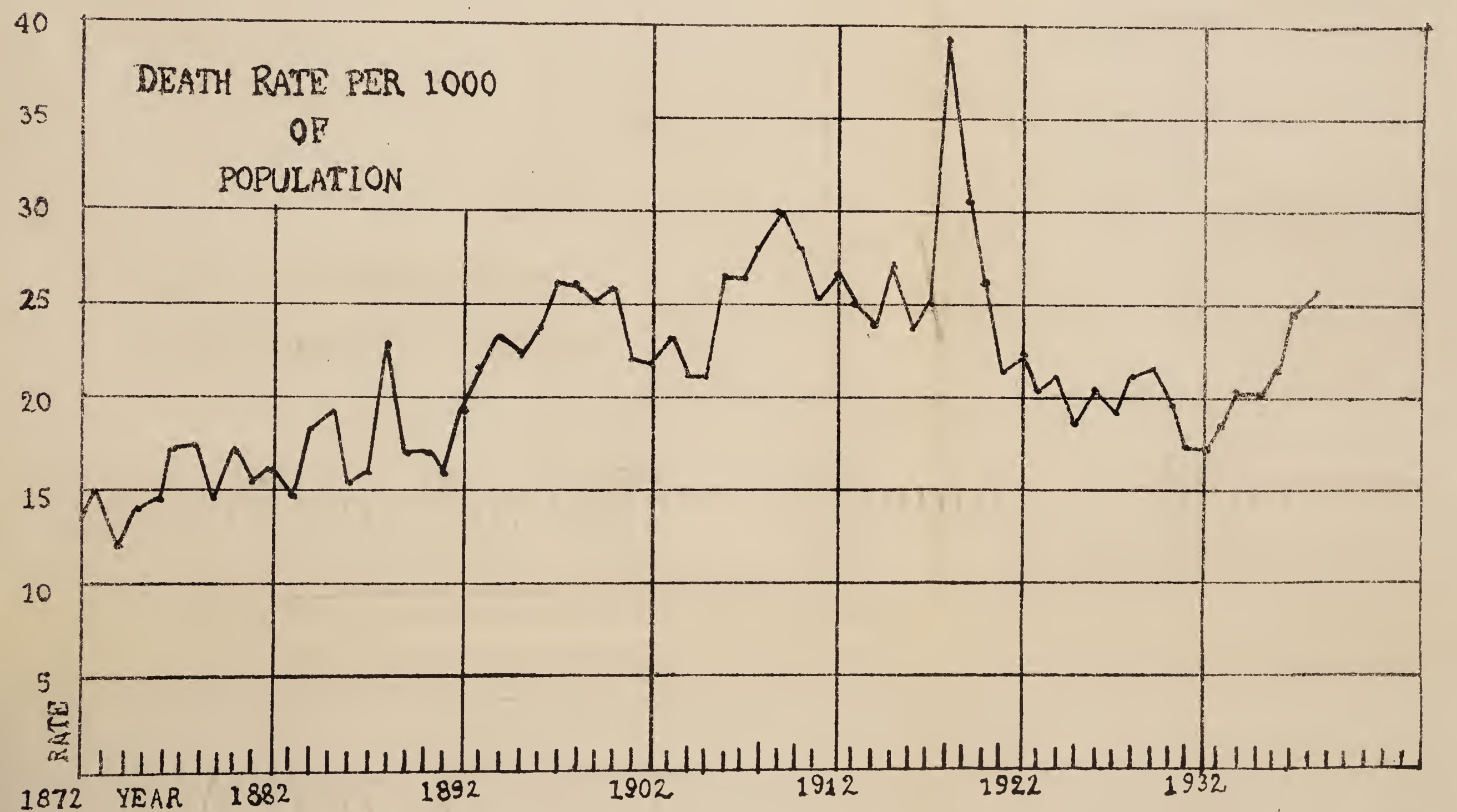
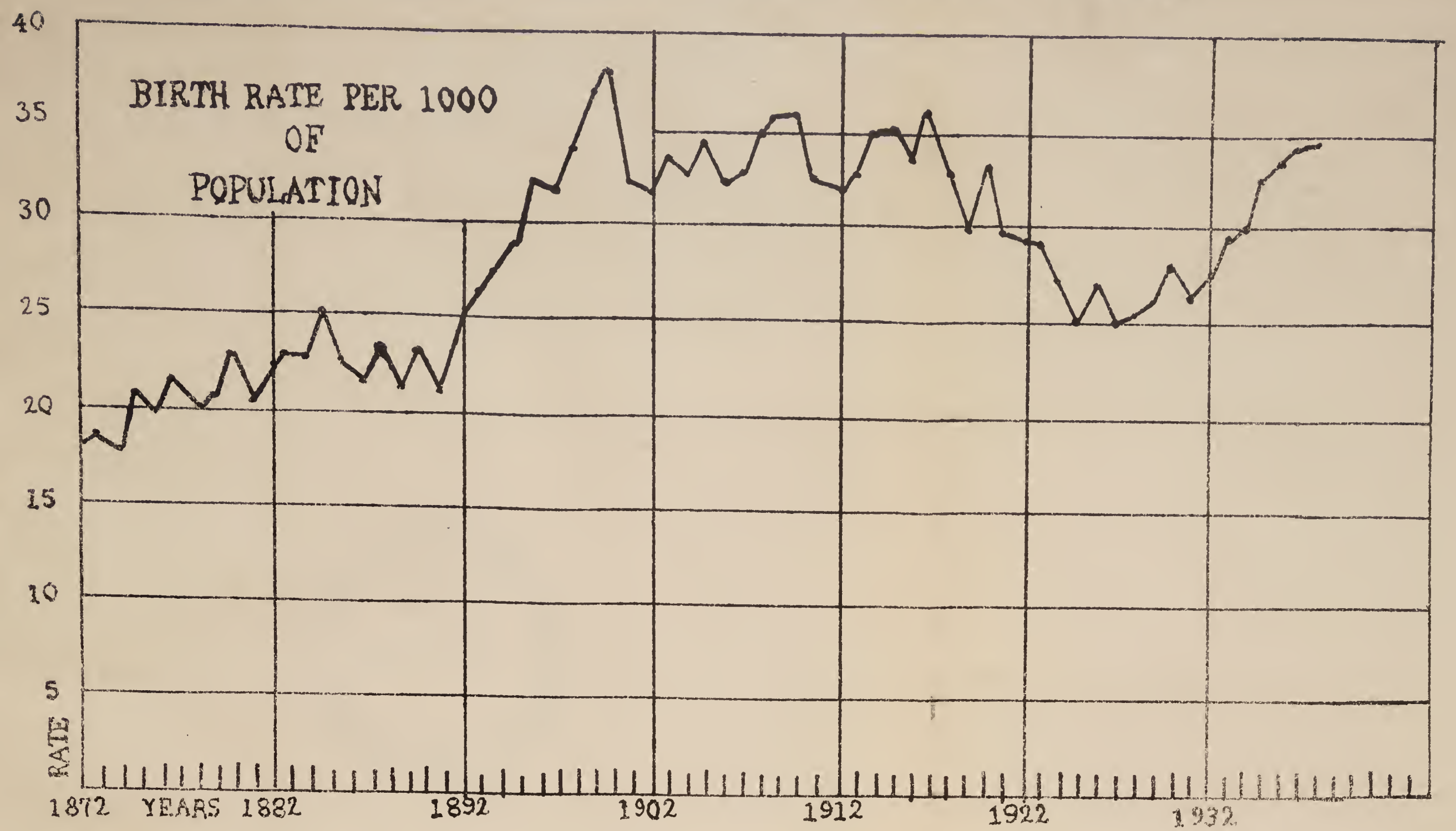
* Includes Cantonment.

† Includes 281 of Cantonments, 85 of Railway Dispensary, 7 of other Dispensary and 123 of Private Medical Practitioners, etc., in Urban Areas.

G.B.C.P.O.—No. 26, D.P.H., 2-10-39—460—III.

VITAL STATISTICS CHART I

BIRTH, DEATH AND INFANT MORTALITY RATES IN BURMA.



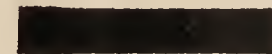
Vital Statistics Chart II

NUMBER OF DEATHS PER 100 BIRTHS IN TOWNS IN 1938.

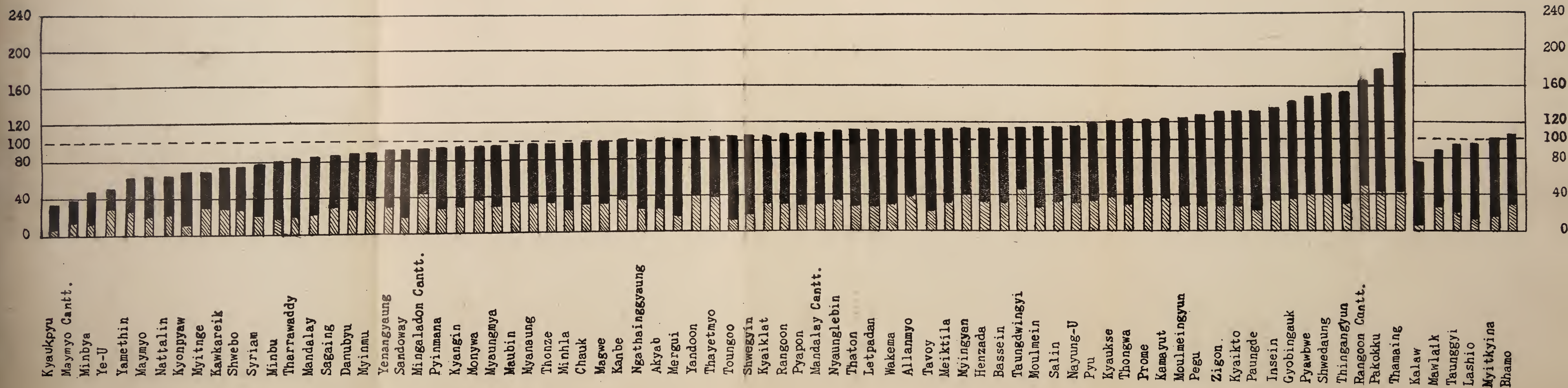
Infant Deaths.



Other Deaths.

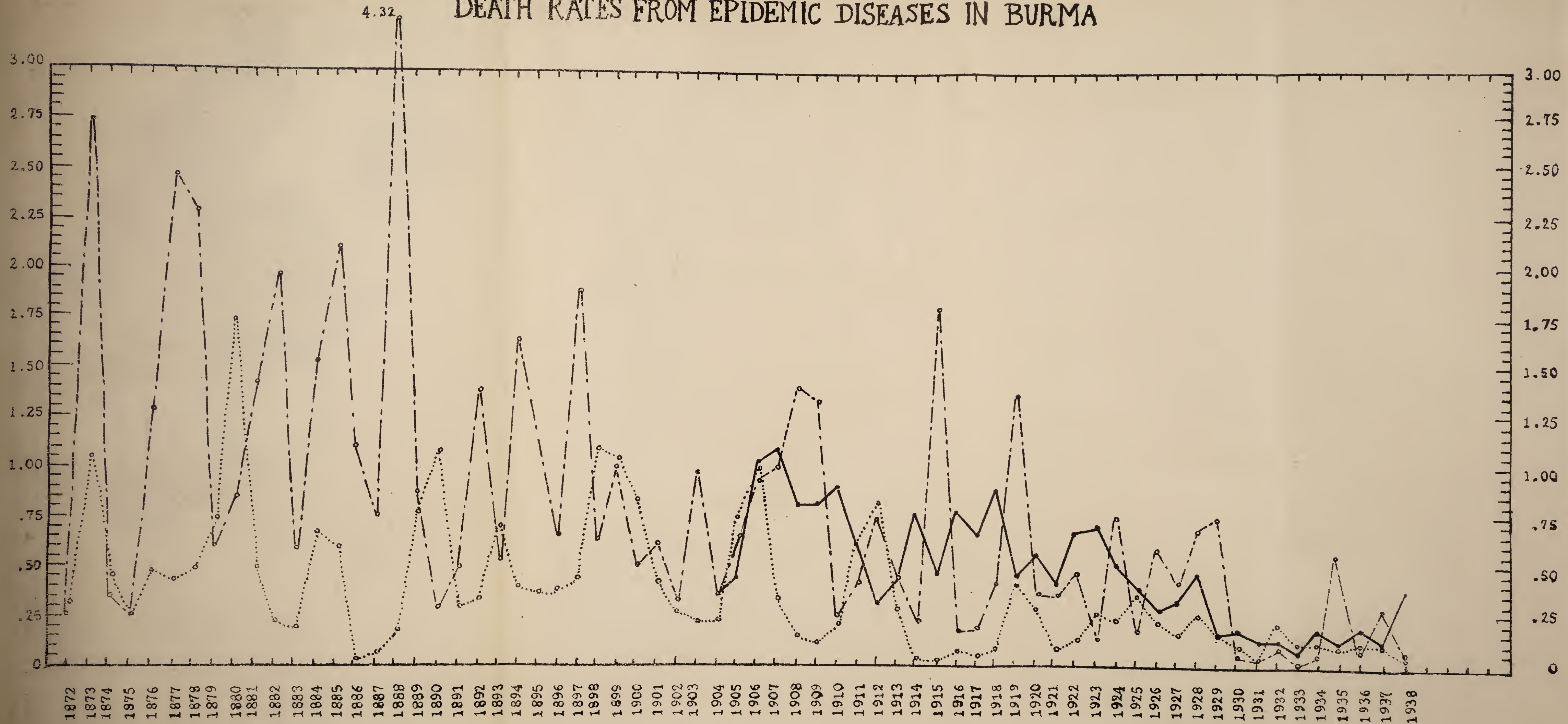


Total Deaths.



VITAL STATISTICS CHART III

DEATH RATES FROM EPIDEMIC DISEASES IN BURMA



References

Cholera death rate thus	— · — · — ·
Smallpox " " "	· — · — · — ·
Plague " " "	— — — — —

REGISTRATION MAP OF BURMA.

REFERENCES

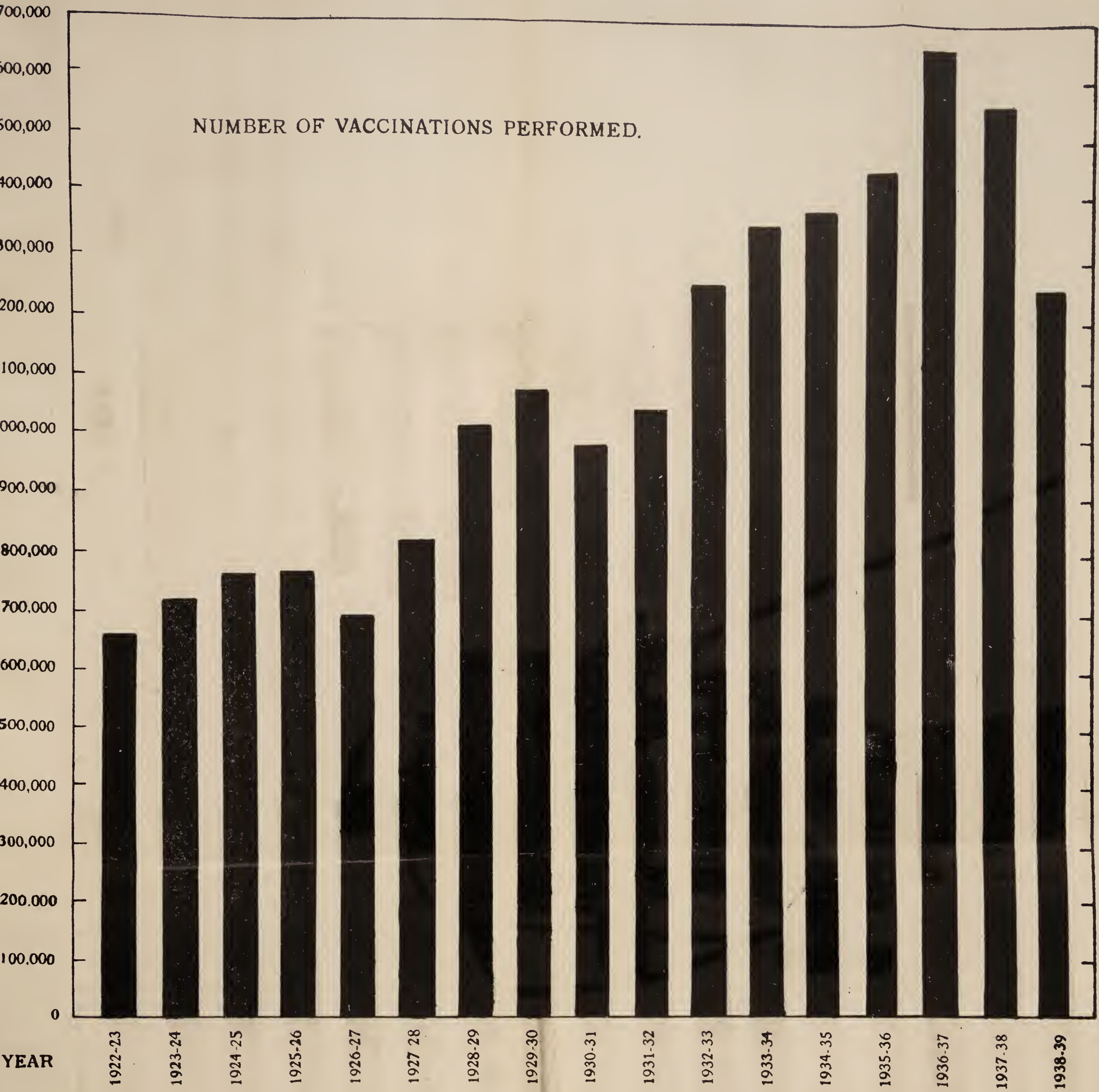
- 1 Regular Registration areas in clear
- 2 Backward areas. shaded.



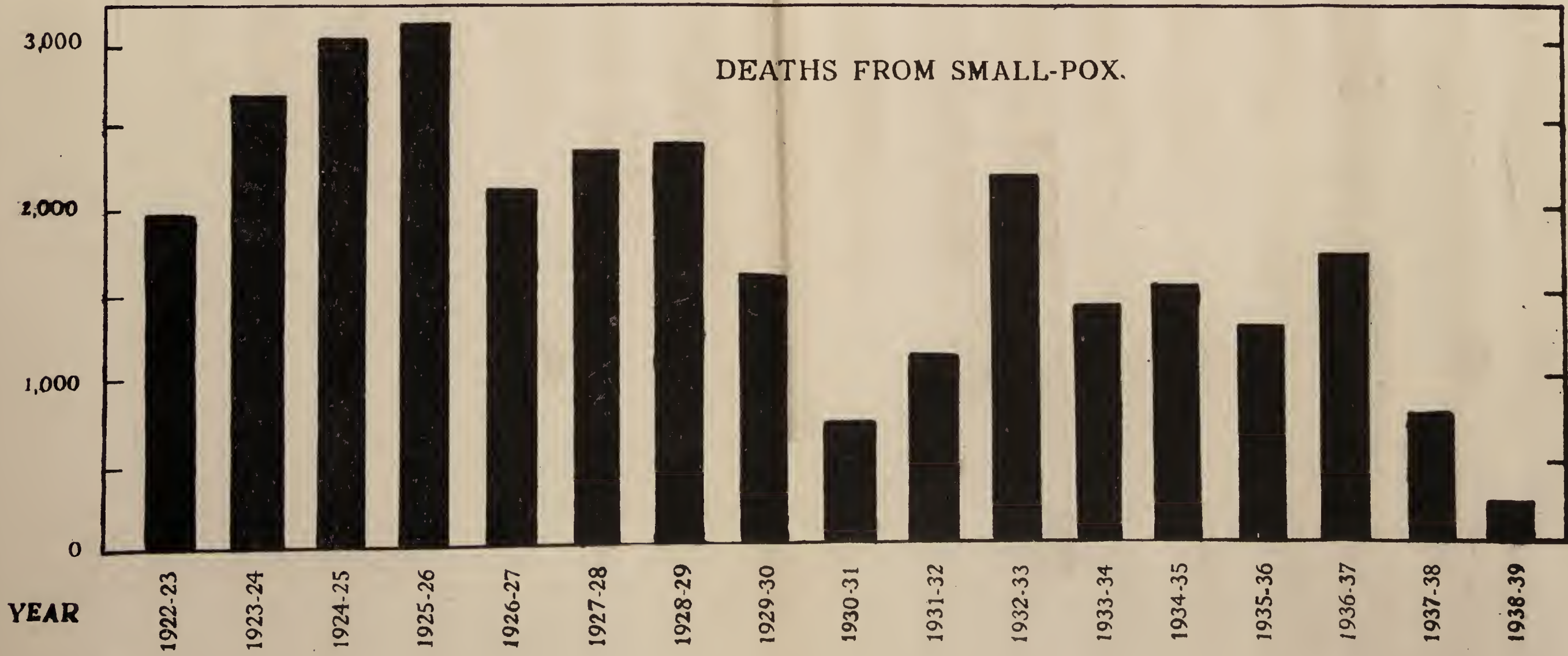
Vaccination Chart I.

Diagrams showing the Vaccinations Performed and the Deaths from Small-pox in Burma (excluding Backward-Tracts) since the year 1922-23.

NUMBER OF VACCINATIONS PERFORMED.

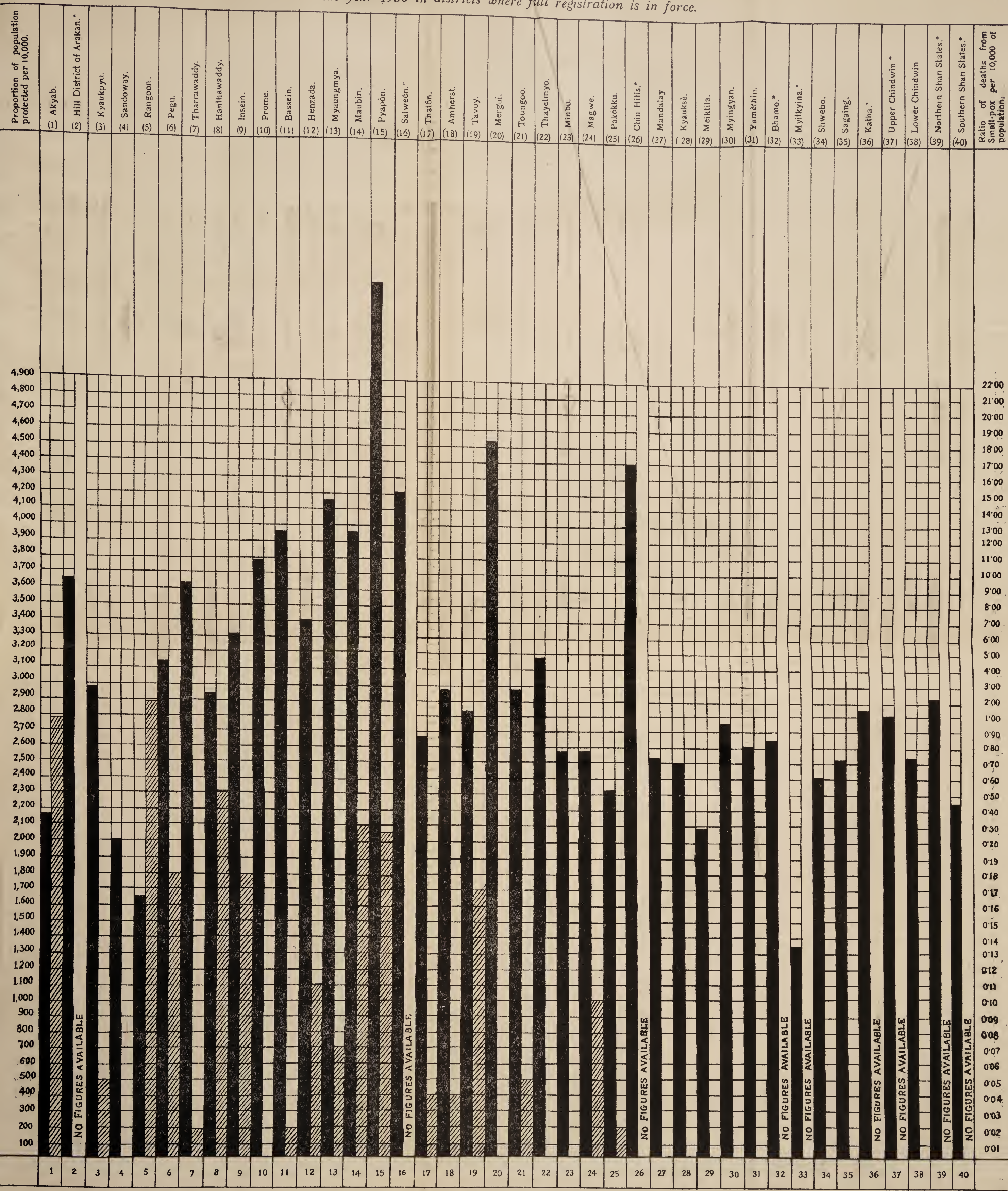


DEATHS FROM SMALL-POX.



Vaccination Chart II.

Diagram showing the Proportion of Population protected during the Seven Official Years from 1932-33 to 1938-39 and the Death-rate from Small-pox during the year 1938 in districts where full registration is in force.



Indicates proportion of population protected per 10,000.
Indicates ratio of deaths from Small-pox per 10,000 of population.
* Full registration of vital statistics is not carried out in these district.



3

